Tanzania

Integration of Contraceptive Products into the Medical Stores Department's Distribution System

June 1997—July 2000

Dr. Catherine Sanga, RCHS
Daniel Mmari, RCHS
Ben Mkasa, MSD
Steve Wilbur, FPLM
Kim Peacock, FPLM

USAID
FPLM
JSI

Tanzania: Integration of Contraceptive Products into the Medical Stores Department's Distribution System

June 1997—July 2000

Dr. Catherine Sanga, RCHS
Daniel Mmari, RCHS
Ben Mkasa, MSD
Steve Wilbur, FPLM
Kim Peacock, FPLM

FPLM

The Family Planning Logistics Management (FPLM) project is funded by the Office of Population of the Bureau of Global Programs of the U.S. Agency for International Development (USAID). The agency's Contraceptives and Logistics Management Division provides a centralized system for contraceptive procurement, maintains a database on commodity assistance, and supports a program for contraceptive logistics management.

Implemented by John Snow, Inc. (JSI) (contract no. CCP-C-00-95-00028-00), and subcontractors (The Futures Group International and the Program for Appropriate Technology in Health [PATH]), the FPLM project works to ensure the continuous supply of high-quality health and family planning products in developing countries. FPLM also provides technical management and analysis of two USAID databases, the contraceptive procurement and shipping database (NEWVERN); and the Population, Health, and Nutrition Projects Database (PPD).

Recommended Citation

Sanga, Catherine, Daniel Mmari, Ben Mkasa, Steve Wilbur, and Kim Peacock. *Tanzania: Integration of Contraceptive Products into the Medical Stores Department's Distribution System: June 1997—July 2000*. Arlington, Va.: Family Planning Logistics Management, for the U.S. Agency for International Development.

FPLM
Family Planning Logistics Management
John Snow, Inc.
1616 North Fort Myer Drive, 11th Floor
Arlington, VA 22209 USA
Phone: 703-528-7474
Fax: 703-528-7480
E-mail: fplm_project@jsi.com
Internet: www.fplm.jsi.com

Contents

Acronyms ix

Executive Summary xi

A. The Decision to Integrate xi

B. The Process of Integration xii

C. Results of the First Year of Integration xii

D. Lessons Learned xiii

E. Next Steps xv

Introduction 1

I. The Decision to Integrate 3

A. The Pressure to Integrate 3

B. Medical Stores Department 1997 3

C. Family Planning Unit 8

D. Mutually Agreed Approaches for Integration 11

II. Recommendations and Observations on the Integration Process 13

III. Beginning of Contractual Discussions 15

A. Financial Discussions 15

B. Transport, Storage, and Materials Handling 17

IV. Contractual Discussions Continued 19

A. Memorandum of Understanding—Finance 19

B. Memorandum of Understanding—Logistics Management Information Systems (LMIS) 20

C. Memorandum of Understanding—Organization and Staffing 21

D. Memorandum of Understanding—Procurement and Supply 22

V. Memorandum of Understanding, Draft Finalized 25

A. Memorandum of Understanding (MoU) 25

B. National AIDS Control Programme (NACP) Logistics Operations 27

VI. Transition Plan 29

A. Background 29

VII. District-Level Study 31

VIII. Integrated Pilot Project Iringa Zone 33

A. MOH/RHU-MSD Zone/Region/District Orientation 33

B. February 1999 34

IX. Phase-In Plan for National Integration 37

A. Phase I Integration of the Dar-Es-Salaam and Mwanza Zones 37

B. Phase II Integration of the Tabora, Mtwara and Tanga Zones 37

C. Outstanding Issues 37

X. Results of First, Full Year of National Integration 39
A. Product Delivered and Costs of Delivery 39
B. Issues Emerging 40
C. Stock Volumes Reduced with Improved Delivery 43
D. Integration Experiences Shared Regionally 44
E. Information from National District level Assessment Survey 44
XI. Next Steps 47
A. Improve Information Exchange 47
B. Improve Monitoring System 47
C. Review Financial Structures 47
D. Improve Request Procedures from District level 47
E. Summary 48
Appendix A Memorandum of Understanding 49
Appendix B Distribution Cost Estimates—1998 61
Appendix C LMIS Reports and Documents Needed 63
Appendix D Roles and Responsibilities of RCHS Logistics Personnel 67
Appendix E Proposed Monitoring and Customs Clearance 71
Appendix F Transition Plan 73
Appendix G Mufindi District 79
Appendix H Transfer of Selected Activities of EPI into MSD Regular Operations—Phase II 89
Appendix I Report on Tanzania Study Tour 97
Appendix J RCHS and MSD Achievements in Operationalizing MoU 109
Appendix K Costs for Contraceptive Storage and Distribution by MSD (July 1999–June 2000) 113

Tables

Table 1. MSD-FPU Charges 26
Table 2. Initial Transfer of Stocks to MSD 33
Table 3. Quantities Distributed and Storage Costs U.S.$ for Contraceptives July 1999–June 2000 43
Table B-1. Distribution Costs for 1998 under the Proposed MSD Integration 61
Table B-2. Distribution and Storage Unit Costs for Forecasted Demand 1998 from Central to District Level 62
Table C-1. LMIS Reports and Documents Required under the Proposed Integrated Distribution System 63
Table F-1. Integration of Contraceptives into the MSD Distribution System 73
Table G-1. Number of SDPs stocked out in January 1998 in Mufindi District 80
Table G-2. Nyololo Supply Status for 1998 81
Table G-3. Nyololo Dispensary Order Fulfillment (from R&R forms) 82
Table G-4. Maduma Dispensary Supply Status for 1998 82
Table G-5. Maduma Dispensary Order Fulfillment (from R&R forms) 82
Table G-6. lfwagi Health Center Supply Status for 1998 83
Table G-7. Ifwagi Health Center Order Fulfillment (from R&R Forms) 83
Table G-8. MTC Dispensary Supply Status for 1998 84
Table G-9. MTC Dispensary Order Fulfillment (from R&R Forms) 84
Table G-10. Luhunga Dispensary Supply Status for 1998 85
Table G-11. Luhunga Dispensary Order Fulfillment (from R&R Forms) 85
Table K-1. Quantities Distributed and Storage Costs (U.S.$) for Contraceptives July 1999–June 2000 114

Acronyms

ARI	acute respiratory infections
CMS	Central Medical Stores
CPR	contraceptive prevalence rate
DACC	District AIDS Coordinator
DCCO	District Cold Chain Officer
DDA	Department of Drug Administration
DFID	Department for International Development (British Agency)
DHB	District Health Board
DHMT	District Health Management Team
DMCH	District MCH Coordinator
DMO	District Medical Officer
EMT	Executive Management Team
FEFO	first-to-expire, first-out
FPU	Family Planning Unit
HIV	human immunodeficiency virus
HMG	His Majesty's Government of Nepal
HMIS	health management information system
HP	health post
IEC	information, education, and communication
JICA	Japan International Cooperation Agency
JSI	John Snow, Inc.
KfW	Kreditanstalt fur Wiedraufbau (German Agency)
LMD	logistics management division
LMIS	logistics management information systems
MCH	Maternal and Child Health
MOH	Ministry of Health
MOS	months of supply
MoU	Memorandum of understanding
MSD	Medical Stores Department
MTB	Medical Tender Board
MTC	Mufindi Tea Company
NACP	National AIDS Control Program
NFPP	National Family Planning Program
NGO	nongovernmental organization
NID	National Immunization Days
NHTC	National Health Training Centre
ORS	oral rehydration solution
PB	Pharmacy Board
PC	personal computer
PoD	Proof of Delivery
R&R	Report and Request forms
RCHU	Reproductive and Child Health Unit
RMCH	Regional Mother and Child Health
SDP	service delivery point
SHP	sub-health post
STD	sexually transmitted disease
TB	tuberculosis

UN	United Nations
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development
WHO	World Health Organization
ZMS	Zonal Medical Stores
ZMSD	Zonal Medical Stores Department

Executive Summary

The process to integrate the vertical distribution system for family planning commodities, run by the Family Planning Unit (FPU) of the Ministry of Health, with the commercial one for essential drugs, vaccines and medical supplies, run by the Medical Stores Department (MSD), took place from June 1997 to July 1999. Full-scale national-level integration started in July 1999, and has just completed its first year nationwide.

The integration appears to have proceeded reasonably well, with family planning products reaching from the National Level to the District level on a timely and accurate basis. Over 1,076 cubic meters of family planning commodities were distributed in this first year, with estimated savings of $196,416 dollars or 58% for the MOH. While improvements are possible, use of a commercial contract with the MSD has saved money and distributed the product as needed.

A few key lessons learned have arisen from this process. These will be discussed in detail below, but are listed here for reference:

- The process of integration requires strong incentives.
- Volume costing made financial calculations possible.
- The role of an impartial mediator was critical.
- The financial savings in this case were worthwhile and substantial.
- The product is available as needed at the District and SDP level.
- Adding family planning distribution onto an on-going MSD system was easier.
- Integration requires open communication and good faith negotiations.
- Adjustments and constant monitoring are necessary and must be built in.

A. The Decision to Integrate

In 1997, the FPU was operating a vertical, stand-alone distribution system to receive, store and distribute family planning supplies to 20 warehouses in the country at the regional level. This system included 22 people, 22 warehouses, and 24 trucks. While not perfect, it delivered contraceptive supplies to the Regional level, and the Regional facilities would deliver to the Districts. The Districts themselves then would be required to further distribute these supplies to the service delivery points (SDPs).

The MSD which had been in operation since 1993, was established with generous support from donors. They were distributing medical drugs, supplies, and essential drug kits, and since 1996, had added the distribution of vaccines, complete with necessary cold chain items. They procured supplies, received them, stored them at central warehouses, and distributed them to 113 sites at the District level, going through seven zonal warehouses. These supplies, largely in kit form, were reaching the District level on a regularly scheduled basis. The MSD operated from a large central warehouse compound in Dar-Es-Salaam, with cold storage warehousing, eight off-site warehouses and 16 trucks and six trailer units for national distribution.

With the Government of Tanzania adopting a health sector reform agenda for all health operations, and the need to move toward some sort of financial sustainability for health delivery, the GOT and the relevant donor organizations looked for areas to reduce costs and improve services. With the example of the MSD providing timely delivery of some health commodities to the District level, and under utilization of MSD fleet capacity, the possibility of delivering family planning supplies through the MSD system was addressed.

The MSD offered both lower delivery costs and delivery directly to 114 District Health warehouses. With the idea of MSD eventually being able to provide this service as a sustainable activity supported by commercial delivery costs, negotiations for this integration began in June 1997.

B. The Process of Integration

The joining of two separate, working logistics supply chains—with separate and duplicate warehouses, vehicles and personnel—is a difficult process. Compound this by the fact that these two systems operate under two very different "corporate cultures"—commercial needs and public sector interests in guaranteeing full supply of contraceptive products—and this explains the need for extensive negotiations, an impartial mediator and pilot testing of the actual integration process.

USAID, as a principle donor of contraceptive supplies, was able to offer the services of the Family Planning Logistics Management (FPLM) project, as an impartial mediator. FPLM had worked extensively with the FPU previously, helping with LMIS systems, training and logistics advice over several years. This allowed FPLM to provide these intermediary services and work with both sides to achieve consensus.

As seen in the full report, this intermediary role required extensive technical assistance visit over the three years. The integration process benefited extensively from this outside negotiator and, at the least, would have taken substantially longer, without this go-between role played by FPLM.

Negotiations on the Memorandum of Understanding—essentially a commercial contract between the MOH and MSD—took place over eighteen months, with numerous drafts proposed and revisions made in formal and informal meetings between the two parties. Final approval for the MoU had to be made at top levels in the MOH and by MSD.

Implementation of the agreed-upon plan was also a stepped process. FPLM helped the two parties examine information needs from the District level in an in-depth study in Mufindi District. Family Planning commodities were first integrated with MSD distribution activities in a six-month pilot project in Iringa Region. This pilot project tested the viability of integration and discovered some issues that were fixed as the program went national. National integration was phased in through two stages, and complete national integration began in July 1999.

C. Results of the First Year of Integration

Following is a table detailing the quantities distributed and storage and distribution costs in US dollars for contraceptives distributed from July 1999 through June 2000. The total costs for these products were $143.130 for the year. This compares with the estimated distribution costs for a year's supply of contraceptive products by the former vertical system of $339,545.

This is a financial saving of approximately $196,500 or 58% from previous costs. And the products are being delivered directly to the District level, not just to the Regional warehouse level. So integration has demonstrated substantial cost savings and brought the products closer to the SDP level.

From the Logistics Assessment Team national survey conducted by a multi-sector team in April/May 2000, contraceptive products are indeed available at the District level in necessary quantities.

From national SAS surveys conducted in 1996 and again in November 1999, stock out rates for contraceptives at the SDP level have dropped from 26.9% percent in 1996 to 11.3% in 1999. This is a strong indication that product delivery has improved in this period.

Costs for this storage and distribution of contraceptive products have been shared almost equally between USAID and UNFPA, which was the arrangement as per the original MoU. These costs have been more than cut in half from the previous system, with improved product delivery.

While improvements to the system are possible, clearly the Ministry of Health has benefited from lower costs and from improved delivery of product under this integrated approach.

D. Lessons Learned

1. The process of integration requires strong incentives.

Joining two parallel distribution systems is not easy. If the incentives to make this work are not sufficiently strong and compelling, other forces working against integration will prevail. In this case, both the government and the donor organizations anticipated strong cost savings in integration and provided a strong push to make this work. With the possibility of improved delivery to a lower level, and a more timely service, and the savings benefits, this was enough to maintain the pressure on the two organizations to reach a mutually agreeable solution.

Health Sector Reform was also a factor, with pressure to eliminate vertical, independent systems. With both MSD and FPU trucks going to essentially the same places, integration seemed worth the effort**.**

2. The decision to use volume costing made financial calculations possible.

Several options to calculate costs were explored early on, none of them quite satisfactory from both sides. Then MSD proposed a uniform cost of $133 per cubic meter of product storage and shipment to the Districts. This was based on their standard calculations for costing other products.

This solved the problem of using percentages of values, which would have made the delivery too expensive for the MOH. It also solved the MSD problem of being able to calculate costs on a uniform basis, figuring in volume size, which as a shipping company, was a key criteria. For example, condoms, which are high volume but low value, could be tracked by the box for MSD purposes.

With this standard $133 per cubic meter, FPLM then helped calculate volume costs per carton, which then let MSD track and cost distribution of each carton to the District level.

3. The role of an impartial mediator was critical.

USAID/Tanzania provided the technical services of FPLM as technical advisors to the MOH and as mediators between the MSD and the MOH. From June 1997 to February 1999, this involved seven

technical assistance visits and approximately 20 weeks in country. This was a substantial commitment of time and resources, but definitely helped moved the process to conclusion.

The continuity of the FPLM advisor provided the key technical contact during the negotiations. Through dialogue, cajoling, presenting different points of view, and alternative suggestions, she helped the two groups work out their own internal issues and find common agreement on the MoU.

From this experience, it seems that an outside negotiator, with no particular point of view to promote except the successful integration of systems, is a necessary part of the process. Integration is a difficult process and an unbiased mediator is important to both sides and to a successful outcome.

4. The financial savings in this case were worthwhile and substantial.

From the first year results, the MOH and donor organizations cut distribution costs in half, reached to a lower customer level and helped reduce stock-out rates at the SDP level. The actual savings are estimated to be $196,000 per year or 58% of previous costs.

This substantial savings and improved service level made the lengthy process worthwhile.

Integration has also put contraceptive product delivery on a commercial basis, so that as systems change to full cost recovery in Tanzania in the future, the first steps have already been taken.

5. The product is available as needed at the District level and SDP level.

A November 1999 SAS survey demonstrated that contraceptive product stockouts had dropped from 26.9% in 1996 to 11.3% in 1999. This 58% improvement in stockout rates in three years is a strong demonstration that contraceptive products are more available now than they were three years ago.

In April /May 2000, a joint RCHS, FPLM, CTU, EPI and FPLM team conducted a logistics assessment survey of a sample of sites across Tanzania. This looked at all product availability at the District and SPD levels. It found that there were some problems, but in general, contraceptive products were more available at the client level than anticipated with less then 10% of sites stocked out of three key contraceptives. Details of this survey are in the annex.

6. The ability to graft family planning distribution onto an on-going system was critical.

It must be remembered that the MOH was able to add family planning commodities onto an existing health supplies distribution system that was working fairly well. This meant that a new system wasn't being created with its entire attendant birthing problems, but that these specific commodities could be added onto something already functioning.

The MSD also had surplus capacity in their fleet—only 52% space utilization—so they were also eager to carry a new product that helped share costs.

If the family planning products were being integrated at the same time that the MSD was being created, this would have meant a different and new set of problems. In this instance, it was very fortunate that the MSD system had the capacity to absorb the vertical family planning system.

7. The process of integration requires open communication and good faith negotiations.

As shown above, this is not an easy process. All parties must be prepared to start and maintain a working dialogue. FPLM helped to keep this dialogue open but the two party's willingness to keep the conversation open was critical.

It is also important to have a champion for the process with sufficient incentives to keep the parties at the table when the dialogue is interrupted.

8. Adjustments to the system and constant monitoring are necessary and must be built in.

The perfect system is unlikely to be created on the first try. The MoU must make allowances for mutually agreed upon changes, in response to changing circumstances and prices. This dialogue and opportunity for chance has been built into the MoU.

The MoU also allows for cost negotiations to be conducted after the first full year of operations.

E. Next Steps

As per the MoU, the MoU can be reviewed after one year. Payments from the RCHS to MSD need to be made on a regular, timely basis. Inadvertently, these fell into arrears, but this problem was quickly corrected.

Adjustments have been made to the regular information reporting made by MSD to the RCHS, in order to improve coordination and oversight. Both formal and informal dialogue needs to be maintained.

Product requirement information needs to be improved from the SDP to the District level, since delay means product availability from the MSD to the District can not be assured. This is the responsibility of the MOH.

Customer Service and customer satisfaction by the MSD to the District level needs to be better tracked. Improvements to this are under discussion between the two parties.

Introduction

Over the course of three years, the Ministry of Health (MOH) in Tanzania took the bold step to integrate an operating, vertical system for the distribution of family planning commodities into the commercial distribution operations of the Medical Stores Department (MSD), a autonomous organization within the MOH distributing essential drugs, vaccines and medical supplies. This report chronicles the decision to integrate the process of integration itself and the results after one full year of integration.

The Ministry of Health and USAID requested that this process be recorded in order to provide insight into lessons learned. It should also shed light on the viability of this activity for other countries that are considering integration of various, vertical procurement and distribution systems for public health commodities.

With many countries facing pressure to integrate and rationalize health distribution systems, these lessons learned are very valuable. Especially with Health Sector Reform, decentralization and financial sustainability, countries around East Africa are looking to improve efficiencies in distribution of health commodities. We believe the example of Tanzania demonstrates the viability of this approach and suggests ways to make this happen.

MSD was established as a non-profit financially self-sustaining organization to be run on a commercially viable basis. The Family Planning Unit of the MOH ran a vertical distribution system, where the key objective was to insure availability of contraceptive products for the consumer at all costs. This report details the process to bring together these two different cultures, with different operating objectives, for a win-win result.

The Memorandum of Understanding between the MSD and the MOH is in effect a commercial contract, between the supplier of the products (the MOH and donors) and the distributor of the product, (MSD). The MoU is attached as an appendix, but is in fact the key document to this integration, as was the process of developing it.

It is not possible to record all steps in the negotiations to agree on this MoU. Numerous drafts were prepared, adjustments and counter-proposals made in a variety of forums, with final review and approvals necessary from the MOH and from the MSD. We would also like to acknowledge the time, technical expertise and diplomatic skills of two FPLM III logistics advisors. Over the course of two years, Beatriz Ayala and Andy Marsden helped negotiate the successful integration of family planning products into the MSD system.

This report is organized along the natural way the process unfolded. The six-page *Executive Summary* highlights key points and records the key lessons learned. Section 1 on *The Decision to Integrate* traces the forces that promoted the start of the discussions and the existing operations of both the MSD and the FPU at that time. *The Integration Recommendations, Section 2*, explains how the process of contractual negotiations eventually lead to the MoU.

The following two sections provide detail on the *Contractual Negotiations*, which took place over eighteen months, and on *The Finalization and Approval of the MoU*.

Section 6 details the *Transition Plan*, and the next three sections 7, 8 and 9 talk about a *District level Study* that reviewed information and data needed, the first *Pilot Integration Program in Iringa Zone* and the full *National Integration* that started in July 1999.

Finally, sections IX reviews the first-year *Results of Nation-wide Integration* and *Section X Next Steps* discusses issues that need to be addressed as the integration process goes into its second full year.

The MoU is the key document in the appendices. This is the final product of the integration negotiations and the operating document ruling the interaction between the MOH and the MSD.

Also in the Appendices are sections containing more detail on job descriptions, transition timetables, the Mufundi district survey and other supporting work. Depending on interest and the need for detail, these sections can provide useful supporting information.

On behalf of the RCHS and USAID, we hope that you will find this report helpful to understand the process and decisions for integration made in Tanzania and perhaps to guide similar programs in other countries.

I. The Decision to Integrate

A. The Pressure to Integrate

In 1997, the Medical Stores Department (MSD) was delivering essential drugs and vaccines from the national level to the District level, using its own system of trucks, warehouses and personnel. At the same time, the Family Planning Unit was delivering contraceptive products to the Regional level, which were then transshipped to the District level, using their own set of trucks, warehouses and personnel.

With strong pressure from the Health Reform Agenda to reduce costs and rationalize health systems, this parallel distribution system was questioned. When the MSD made initial calculations that they could likely cut distribution costs for the FPU in half, the pressure to integrate the two delivery systems, improve service to the MOH client and cut costs started the process of integration. At this stage, USAID pledged the assistance of FPLM to provide technical guidance and intermediary services for this integration process.

In this section, the status of the MSD and the FPU in 1997 are detailed, in order to record the structure and capabilities of the two organizations prior to the integration process.

B. Medical Stores Department 1997

1. General Overview of MSD

Prior to the creation of the MSD in 1993, the Central Medical Stores had responsibility for procurement and delivery of drugs and medical supplies. Since the late eighties, CMS had had major constraints, which made efficiency and effectiveness elusive. Some of these problems were—

- Inappropriate policies
- Shortage of drugs and other health supplies
- Inefficient management and administration
- Lack of resources resulting in poor drug financing
- Inadequate security services
- Irrational drug use
- Inefficient procurement and management services
- Overstaffing.

These problems made it difficult for CMS to sustain a continuous supply of drugs and medical supplies to the Public Health Sector which had six National (referral) hospitals, 20 Regional hospitals, 114 District Hospitals and approximately 3,500 Health Centers and dispensaries.

To respond to these problems, the government commissioned a study in 1991 to develop recommendations on how best the government of Tanzania could resolve the drug crisis.

The key output from this study was a Pharmaceutical Master Plan for the period 1992–2000, which included the recommendation to make CMS an autonomous body.

As a result, in 1993 the Medical Store Department was established as an autonomous department in the Ministry of Health through an Act of Parliament (the Act of Parliament of 22 September 1993). The main objective was "to serve the public through delivery of drugs and other medical supplies to Public Health facilities and to serve the private sector with narcotics only."

The MSD was expected to be a non-profit, though financially self-sustaining institution.

2. Physical Layout of MSD in 1999

MSD is based in Dar-Es-Salaam. The operations are within a five-acre compound, with additional eight rented warehouses in Dar-Es-Salaam.

Housed within the central compound are—

- An advanced security system managed by a private firm.
- The Office Block which houses the four directorates.
- The Central warehouse that houses the receiving section, a picking section, a dispatch section and a storage area. The latter area has different temperature levels. The main warehouse has two detached stores:
  - The vaccine store: a huge cold room with eight freezers where the vaccines are stored.
  - The inflammable store: used to store the inflammable items like laboratory reagents.
- An underground water tank with a capacity of 40,000 liters, all of which is rainwater collected from roof catchment.
- Fire fighting equipment generously located at almost every corner
- Two stand-by generators with automatic switches.

3. Management Structure

The Board of Trustees provides the general guidance for MSD management, while technical managers run the department on a day-to-day basis, through four technical directorates.

Board of *Trustees*

The Board is composed of a chairman and eight members. It is non-executive and the President of Tanzania appoints the chairman. The Minister for Health appoints other members. The members are drawn exclusively from the Public Sector (MOH, Home Affairs, Works, Ministry of Law, Ministry of Children and Women, etc). The Minister for Health appoints the board, which serves for a term of three years. The board meets four times in a year and five members constitute a quorum.

Main role of the board

- Guide, direct, and oversee the management of MSD.
- Formulate and review policy guidelines of the Department's functions.
- Submit the Department's annual work plans and budget for the Minister's approval.
- Determine the price of the drugs and medical supplies.

Other than the Board of Trustee's regulations, other regulations are in place and used in running the MSD including the Ministry of Health regulations, the in-house MSD regulations, and the procurement manuals for MSD.

Technical management

The technical arm of MSD provides the day to day management of the department. During the formative years, an external management firm with financial support from DANIDA managed MSD under a five-year contract. Every external consultant was teamed with a local expert. This arrangement was to provide training and capacity building for local personnel who were expected to take over the management of MSD at the end of the five-year contract. This was designed to ensure a smooth transition to the local managers. In July 1999, all expatriates had left except for the Finance and Administration Director.

There are four directorates, all managed by directors assisted by middle-level managers. The directorates are—

- Directorate General
- Directorate of Finance and Administration
- Directorate of Procurement
- Directorate of Distribution and Sales.

Staffing

Under CMS, there were 500 staff members This number was reduced to the current 250 through deployment to other government departments and retrenchment. The remaining staff signed a new contract with MSD but will still get their retirement benefits from the former employer (the government). Their contracts with MSD were backdated to 1994 and are reviewed annually, based on their performance appraisal.

4. Functions of the Directorates

Directorate General

The Director General, who heads the Directorate General is—

- Accountable to the Board of Trustees
- The Secretary to the Board of Trustees

- In-charge of all management matters including strategic planning, marketing, team building, and co-ordination between the directorates
- The supervisor of MSD Managers and staff
- Expected to ensure sustainability of MSD managerial, financial and logistics operations.

Other departments within this directorate are MSD Product Pricing and Quality Assurance.

Directorate of Finance and Administration

The Finance and Administration Director is in charge of the following services and departments.

- Accounting and providing financial statements to the management, budgeting
- Personnel matters plus human resource development, staff rationalization
- Salary structure
- Information management system strategy (computerization)
- Audit.

Directorate of Procurement

The Director of Procurement is in charge of the following functional departments and services.

- Coordination of procurement functions
- Pharmaceuticals and medical supplies
- Special procurement needs
- Tendering processes
- Payments of supplies once procured
- Clearing and forwarding activities
- Processing claims and insurance
- Receiving.

The Medical Tender Board guides procurement.

Medical Tender Board

The Central Tender Board is in charge of procurement for the government. The Medical Tender Board was formed at the request of the MoU Trustees to facilitate and shorten procurement procedures within MSD.

The main functions of the Medical Tender Board (MTD) are—

- Advertising, receiving, and opening the tenders
- Tender adjudication
- Issuing contracts to winning bidders
- Monitoring and evaluation of the suppliers' performance
- Accountability.

The Executive Management Team

The Executive Management Team (EMT) facilitates emergency procurement. The team is comprised of members from the four directors in MSD. The EMT has the power to procure emergency supplies up to a ceiling of US $100,000 without prior MTB approval. But consultation with the chairman of MTB is mandatory.

Directorate of Distribution and Sales

The Director of Distribution and Sales, the largest of the three directorates, is in charge of the following services and departments:

- Warehousing, storage, and inventory control
- Distribution management from the central level to the zone
- Security management
- Supervision of the zonal stores
- Rehabilitation and construction of warehouses, monitoring and evaluation
- Transport management, including, managing the diesel plant and maintaining the in-house garage.

Transport

The directorate has a strong transport department with 16 trucks (Scania), six trailers (ten toners which actually carry 20 tons each) for distribution of medical supplies and 16 staff vehicles. There are seven zonal stores and all are provided with two trucks, a pick-up and a motorcycle each. There is a diesel plant managed by MSD where the trucks are refueled.

Warehousing

This group deals with orders to customers and distribution to zonal stores. The warehouse has well maintained records but is not computerized. All the records are manually maintained.

Distribution

There are three types of distribution systems:

- PUSH system for essential drugs kits. distribution is done on regular basis as directed by the Ministry
- Loose (non-kit) drugs
- Non-MSD stocks, vertical programs.

Integration of vertical programs

The following vertical programs have been integrated into the MSD drug distribution system: EPI, TB and leprosy, STD/NACP supplies, and malaria.

Sales

There is an inventory management to control the sales and ensure that all commodities needed by hospitals are available, the overall service level is about 80% for MSD.

Security system

The MSD has a state of the art security system, managed by a private company called Group 4. Specific security systems are—

- Electronic surveillance instruments, alarm systems, and security cameras
- An electric fence along the entire MSD perimeter wall
- Control of the movement of the people and vehicles at the gate
- Checking and stock verifications.

The zonal stores

The Medical Supplies Department runs seven zonal stores located in Mwanza, Moshi, Tabora, Tanga, Iringa, Mbeya, and Mtwara .The department services 20 regions, 113 Districts and 2,912 health facilities (health centers and dispensaries). The team was able to visit one of the depots at Mwanza.

C. Family Planning Unit

1. The Maternal and Child Health (MCH) Family Planning Unit (FPU)

Background

Family planning services were integrated into the MCH services by establishing a family Planning Unit (FPU) under the MSH Division of the Ministry of Health. This was founded in 1989 with the support of UNFPA and USAID funding. The programmatic running costs, including some salaries are borne by the Government of Tanzania.

The FPU comprises, at head office level, the following sections:

- Information, education, and communication
- Logistics
- Monitoring and evaluation
- Training
- MIS
- Service delivery
- Community-based distribution
- Finance
- Administration.

The program, headed by Dr. Calister Simbakalia in 1997, is based in a new, NORAD-funded office facility within the Muhimbili National Hospital premises in Dar-Es-Salaam.

2. Family Planning Inbound Materials Pipeline

Contraceptive commodities are supplied from a variety of overseas suppliers funded by the various donors active in family planning in Tanzania including USAID, UNFPA, DFID, and KfW There are two modes of shipment—air and sea. Emergency or small shipments are generally air-freighted—all else are sea freighted.

Shipping and customs clearance falls under the responsibility of a variety of third-party freight forwarders and procurement agents with offices in Dar-Es-Salaam. These include Crown Agents, Walford Meadows, Interfreight, and Panalpina.

Consignment of supplies is usually "door-to-door," with the FPU responsible for receiving the commodities from the appropriate air or sea port after clearance from the freight forwarder. The donors thus finance such storage, transport, and duties that are payable in either port.

Information regarding the status of orders—shipped, in transit, awaiting clearance, cleared etc., is variable depending on the level of communication to the FPU by the donors and agents involved.

All incoming deliveries, including those from local suppliers, are directed to the Mikocheni warehouse on the outskirts of Dar-Es-Salaam. Two units on an industria1 estate are rented, with USAID funding on behalf of the FPU, storage of contraceptive commodities and all reproductive health-related medical supplies, equipment and training materials. An FPU stores officer manages the stores with inventory records held at the Muhimbili offices.

3. Finance

Logistics services undertaken by the FPU, either for Reproductive Health, or (occasionally) other departments, are not chargeable items.

Budgeting for such services is completed by the FPU, either for Reproductive Health, or (occasionally) other departments, are not chargeable items.

The budget is again sub-divided between the variable costs of running vehicles—drivers per diems, fuel, allowances and minor repairs (percentage of the fuel allowance)—and the more significant maintenance and repair costs. The budgets are submitted to either USAID or UNFPA for approval (the two donors collaborate to fund different elements of the program) on an annual basis.

4. FPU National Distribution Operations

Central/national warehouse

The Mikocheni warehouse serves as a national store for all-contraceptive commodities, reproductive health-related hospital equipment, and IEC materials, reporting documents, training materials and other miscellaneous items, such as bicycles. The Stores Officer is based at the FPU offices at Muhimbili, traveling to Mikocheni, as required, to oversee operations.

All national distribution of reproductive health supplies emanates from Mikocheni.

National to regional transport

There are currently four ten-ton trucks operating under the auspices of the FPU based in Dar-Es-Salaam—two Scania (UNFPA-donated) and two Mitsubishi's (USAID-donated).

These deliver according to fixed routings, delivering to each of the 20 regions on a quarterly basis, supplying three or four regions per route.

Additionally the vehicles may be required to make emergency deliveries of contraceptive commodities if there is a stock out.

Zanzibar is administered separately and organizes its own commodity collections for its five regions from Mikocheni and onward distribution from its Unguja warehouse to Pemba, as required.

Regions

At the regional level, the Regional MCH Coordinator takes delivery of the commodities supplied from the national warehouse and is responsible for storage and onward distribution to the districts.

Storage may be in an office area or a separate storage area. There has been various program initiatives to store contraceptives with other public health supplies.

Regional to district transportation

Currently (May 1997), all but two of the regions share a system of onward distribution of commodities with the EPI program. The FPU (via USAID) provides a Toyota Hi-Lux double cab per region and its running costs are met by the EPI program.

The vehicle is utilized for combined supervisory and delivery visits for contraceptives and vaccines (though this system may change with the ongoing health service reforms as detailed below). Deliveries to the districts are completed on a monthly basis through this system.

Districts

At the district level, the District MCH coordinators (over 110 with a similar number of assistant officers), take delivery of the supplies from his/her supervisor (the Regional MCH Coordinator or assistant) and is responsible for onward delivery to approximately 3,000 of the 5,000 service delivery points (SDP).

Storage standards and facilities at the regional levels will be of variable quality.

District to service delivery point transport

Prevailing practice has been, until recently, that supervisory visits and delivery of vaccines and contraceptives are combined on a monthly basis. This now changing under the health sector reforms. The practice in future will be to separate out the delivery and supervision tasks at District level though still on a monthly basis. Each district now has at least one, recently acquired, sing1e or double-cab Toyota pickup funded by DANIDA (there are approximately 240 vehicles nationwide).

This impacts the logistics systems since the current practice of completing the Report and Request (R-& R.) forms, which are the foundation of the contraceptive logistics management information system, will be stopped and that no longer will the allocation decisions be made concurrently with the deliveries. There is no strategy at present for managing allocation decisions under the new arrangement. However, the two most obvious options are the completion of the R&R forms by the "In Charges" (though they are currently untrained in this activity) and the submission of the R&R forms to the District MCH via the delivery driver. Alternatively the R&R. form will be completed independently of the delivery during the supervisory visit. In this scenario, mechanisms for determining order quantities and the associated information flow will require more detailed review.

D. Mutually Agreed Approaches for Integration

The experience of other integrated programs in Tanzania had been that deficiencies in the planning process have manifested themselves in subsequent dissatisfaction with the arrangements for integration. It is therefore proposed, in line with a consensus that emerged from the involved parties, that the integration process continues with maximum attention be given to the impact of proposed integration initiatives. Also, all parties agree that a thorough documentation of the anticipated outputs from the process through the production of a detailed Memorandum of Understanding between the MCH/FPU and MSD is concluded. It is proposed that agreement on the specifics of the Memorandum be achieved through consultations between the two primary participants in the revised system—MCH/FPU and MSD—and all the stakeholders. This process should be supported by the provision of appropriate technical assistance to facilitate, provide technical expertise and offer additional resource to address the incremental workload. A timeframe to reach agreement on the Memorandum by October 1997 was developed which included full breakdown of the tasks involved.

II. Recommendations and Observations on the Integration Process

The following formal set of recommendations and general observations on the process to be employed were decided in consultation with the MOH and with the MCH/FPU.

- The MCH/FPU initiate a dialogue and planning with all invo1ved parties in order to implement an integrated system of contraceptive commodity supply at the earliest opportunity.
- Such planning is conducted in a consultative manner in order to build consensus on the modalities of the integrative process With the parties, including the appropriate representatives of the Ministry of Health donors, MSD, NGOs, and other programs.
- The integration process makes full provision for managing the expectations of all parties through open communication dialogue and documentation of any agreed upon arrangements.

In summary, these recommendations are made after consideration of the relative merits for the provision of contraceptives under an integrated supply system in Tanzania. These are as follows—

1. *Commercial*. MSD indicated that they are able to offer the delivery of contraceptives from national to district level at a cost less than that of the current FPU "in-house" operation.

2. *Prevailing supply arrangements.* The current collaborative program for distributing contraceptives and EPI vaccines together will conclude between regions and districts by the end of July 1997 The interim arrangement for the ongoing supply of contraceptives alone is not scheduled to continue after 1997.

3. *LMIS.* The recently introduced and functioning Report and Request (R&R) system will in any event have to be reviewed and revised to address the requirements of the ongoing health sector reforms.

4. *Sustainability.* The current FPU operation is sustained entirely by donor funding. MSD is scheduled to become a self-supporting institution.

5. *Cost visibility*. The costs and sources of funding of current supply operations lack visibility to both users and donors. Under an integrated system there is transparency and accountability.

6. *Time managemen*t. The reallocation of operational resources to logistics specialists frees the time of the FPU technical experts to concentrate their efforts on family planing and service delivery.

7. *Natural progression.* An integrated supply system for contraceptives is the natural conclusion of current health reforms. As such, the two main players, the FPU and MSD, warmly endorse it.

8. *Resourcing.* Provision of contraceptives will, under an integrated system, become an element of business subject to routine budgeting, planning and managerial controls.

9. *Assets.* The current FPU assets are readily transferable, without loss, with the agreement of the parties involved. The warehouse lease may be transferred or closed, the vehicles sold and the relevant staff redeployed or transferred.

10. *Project management*. Notwithstanding the problems identified below, there is a wealth of in-country and regional expertise to facilitate the transition to an integrated supply system.

11. *Quantifiable data.* There is a rich source of data in the family planning system generally which can be used for planning the integration process and to support decisionmaking.

12. *Available capacity.* MSD can resource the proposed integration without significant investment or amendment to current operating practice.

Possible reasons for reluctance to integrate the contraceptive supply system include—

1. *Workload*. Even the act of considering the integration process, given the myriad of issues, places an additional workload on existing FPU staff. Implementation will produce further demands.

2. *Confidence*. Documented agreements are not guarantees of success. Such success will require confidence in working relationships. This confidence generally arises from consistent dealings over a period of time.

3. *Learning curve.* New arrangements require new skills which personnel may be reluctant to adapt to or acquire.

4. *Coordination.* Where consensus is required between interest groups, implementing new systems requires coordination between the parties, making decision-making more difficult and time-consuming.

5. *Prior experience.* The experience of previous programs in the integrated supply system in Tanzania has not been entirely harmonious or successful.

6. *Transition*. Notwithstanding the best intentions, given the magnitude and complexity of the new systems there will inevitably be difficulties in their implementation.

7. *Relationships.* A new supply system will alter the nature of existing professional relationships.

8. *Control.* The transfer of operational systems does herald some loss of direct control over resources.

III. Beginning of Contractual Discussions

The Memorandum of Understanding (MoU) between the MCH/FPU and MSD will detail the expectations of both parties. In itself, it is not a guarantee of satisfactory partnership but by thorough review and documentation of the requirements of both parties, it is anticipated that subsequent problems arising from unforeseen issues can be minimized.

To this end, the FPLM consultants have advised dividing the planning for agreement on the Memorandum into eight discrete functional areas. This section addresses the initial discussions on finance and the handling of the following areas, storage, transport and material handling.

While there is general agreement on what comprises reasonable terms in the type of commercial relationship proposed, it is particularly important to explore areas outside mainstream practice where there are additional expectations by one or other of the parties. Hence, FPLM have initiated review of these interactions between the involved parties. In summary, the issues identified in the functional areas are as follows:

A. Financial Discussions

Regarding financing, the most common concern is the ongoing role of the donors vis-a-vis the Government in the development of a sustainable system for contraceptive commodity distribution. This requires further and more detailed review. Additionally, there are practical issues relating to the mechanisms required to administer the commercial relationship between MSD and MCH/FPU, which must be addressed.

A dialogue regarding the commercial terms to be contained within the Memorandum has been initiated and the expectation is that significant cost savings for the provision of commodities can be achieved through utilizing the services of MSD.

1. Background

The MCH/FPU currently ensures the ongoing availability of contraceptive commodities and equipment in Ministry of Health clinics, in part through the services of its own distribution operation. This operation, which distributes from the national to the regional level only, comprises four delivery vehicles, one national warehouse plus various members of support staff. The cost of this service has been estimated in a JSI/FPLM study at approximately $342,000 per annum. Currently funding for the operation is given in full from two donors, USAID and UNFPA. They also provide funding to support some of the staff involved with administering the delivery system, with the remainder are funded directly by the Ministry of Health.

Ministry of Health vehicles based at the region and district offices respectively completes the onward distribution of commodities from the regions to the districts, and the districts to the service delivery points. These are financed through the relevant regional or district health management team budgets but with donor funding which is currently provided by DANIDA. This is financed either through the EPI program or the health sector reforms. The MCH/FPU has an outstanding agreement to utilize EPI vehicles at sub-district level, in those places where EPI has not integrated their distribution program. This agreement expires at the end of 1997.

With integration, commodities will be distributed through the MSD distribution network to their seven zonal warehouses and onward shipment of the contraceptives to each district. MSD responsibility for the provision of commodities will cease at the District level.

MSD services include procurement, clearing, storage and transport. Currently MSD serves a variety of clients including the Essential Drugs Program (kits and loose drugs), Laboratory Supplies and the EPI program. All operations are chargeable but by different mechanisms. For the EPI program, DANIDA provide vaccines free to clients, and there is no budget line item for distribution costs at district level—these are met in full by DANIDA through an account held at MSD.

For drugs, plans are being developed to establish a revolving fund (which will be set up with donor assistance), with the objective of creating a self-sustainable arrangement. The District Health Management Teams will use funds generated from cost recovery mechanisms on an ongoing basis for the purchase of distribution services from MSD. However, such schemes are some way from fruition and should not influence deliberations on the short-term requirements of the integration program.

The traditional method MSD has used for charging for their distribution service has been based on a proportion of the product value. However, this is recognized as not supportable when the commodity is particularly expensive, as is Depo-Provera® for example. MSD have thus made a proposal to charge according to volume based on case and/or pallet throughput. This is not influenced by the purchase price of the commodity. This is a particularly welcome initiative and will result in a realistic price structure for the provision of contraceptive distribution services.

Public sector contraceptive commodities are currently free and not charged items to service users. There is no cost recovery mechanism or plans to implement such a scheme at the time of these discussions in August 1997. Contraceptive distribution does not appear as a line item within District Health Management Team budgets (though transportation, through the Central Transport Unit does). At the national level, the MCH/FPU does have a budget line for contraceptive distribution, which was introduced in 1997/1998. Though relatively small (c.TS 10,000,000), its presence as a discrete item is an important recognition of the requirements of the Family Planning program.

2. Major Financial Issues Addressed

Short-term

The MCH/FPU is seeking to integrate the contraceptive commodity distribution operation into MSD during the first half of 1998. A number of finance-related issues require immediate attention, including—

- Agreement of the nature of the service MSD will provide.
- Agreement on the rates for provision of that service.
- Agreement on disbursement mechanisms.
- Agreement on funding sources for those disbursements.
- Provision of human resources on the part of the MCH/FPU to administer the above.

The most immediate requirements are to reach such short-term agreement so that the MCH/FPU can distribute contraceptives through MSD. JSI/FPLM is coordinating production of the Memorandum of Understanding, which will address this need.

Secondly, JSI/FPLM is working with MSD and the MCH/FPU to reach agreement on the commercial terms for such a relationship to begin

However, a concern was the stance of the donors towards the short-term provision of funding for the MCH/FPU to pay MSD for the service. Of the current donors, three of the four are ready to support the use of their funds for the provision of a contraceptive distribution service by the MSD. There are also y other donors who could be involved in such an agreement, such as the World Bank. Social marketing revenues are an additional potential source of finance.

Under the commercial terms currently being reviewed, there will be very significant cost savings to the donors through the deployment of MSD. This has been recognized and will facilitate agreement. An additional source of one-time operational funds is the sale of the current MCH/FPU vehicle fleet.

High level review of all the above is required from the Ministry of Health in Tanzania so that they can lead and direct deliberations on the part of the government for this critically important area. JSI/FPLM is try to enable this to happen and to coordinate the immediate requirements of the Family Planning Unit with the broader objectives of the Ministry of Health and their current integration program.

Long-term

In the longer term, the following issues required review:

- Commitment of the Government of Tanzania to assume responsibility for funding contraceptive commodity distribution operations.
- Agreement on transition plan to achieve the statement above.
- Integration of contraceptive commodity distribution into a routine public sector health commodity ordering and distribution system.

B. Transport, Storage, and Materials Handling

The areas of responsibilities for transport, storage and materials handling were reviewed and completed. Below are the general topics that were covered for each area.

Transport
- Provision of routine and non-routine deliveries and collections
- Documentation requirements
- Transit conditions
- Commodity insurance coverage

Storage
- Access by MCH/FPU staff
- Warehouse practice
- Audit requirements
- Disposals procedures
- Commodity insurance coverage

Materials Handling
- Batch traceability
- Quarantine procedures
- Stock rotation
- Environmental conditions
- Commodity compatibility

IV. Contractual Discussions Continued

The proposed integration of the Tanzania public sector contraceptive supply into the Medical Stores Department (MSD) is scheduled to commence in the second quarter of 1998. This is predicated on the production and agreement between the Ministry of Health and MSD on the terms of a Memorandum of Understanding.

Three of the eight Memorandum sections addressing storage, transport and materials handling were produced in August 1997. These were revised following feedback and comment.

In addition five new sections were completed during November 1997 addressing procurement and supply, monitoring and evaluation, finance, the logistics management information system and staffing and organization. These were presented in draft form to a target audience of all involved parties and subsequently revised where necessary.

Other items produced during the assignment relating to the ongoing integration process include a plan detailing the steps necessary to be taken in the transition period. It is anticipated that three months of preparation time would be necessary to administer the necessary preparatory steps. The relevant tasks, personnel involved and time scales are detailed below.

Also detailed are the technical support needs identified in the course of the assignment.

Specifically these include the review of the logistics management information system at district level and below, the development of the monitoring and evaluation system and support during the transition period and the initial "live" running of the integrated system.

Integration needs to be monitored and evaluated carefully, both to ensure that there is no interruption of contraceptive supply, and to provide the MOH with guidelines for integrating other vertical distribution systems. Consequently, an evaluation of integration—both the process and the outcomes—is scheduled for October 1998 (i.e., six months after integration has begun).

A. Memorandum of Understanding—Finance

1. Background

MSD will charge the FPU for distributing public sector contraceptives from the national to the district level in Tanzania. The pricing structure is included in the Appendices. The service will be payable in arrears after delivery is confirmed.

MSD may also provide additional associated services at prevailing commercial rates based on their standard hiring charges.

Initially the sources for payments to MSD will be primarily donor funding. But, in the interests of sustainability, it is anticipated that the Ministry of Health will assume responsibility for an increasing proportion of that budget culminating in full responsibility by the year 2001.

2. Payment Mechanisms

For MSD to have confidence that payments will be made in a timely manner, an imprest account, holding funds on abeyance, will be created for settling invoices arising for the provision of MSD's services to the FPU. This account will be maintained at a predetermined level agreed between MSD and the FPU based on the projected value of throughput of the contraceptives.

Deposits to the imprest account will be made under the direction of the FPU from their own contraceptive distribution account. The FPU account itself will also be utilized for receipts of donor funds to the FPU. These will be made quarterly according to need and in accordance with schedules agreed between the relevant donors and the FPU.

3. Invoice Cycle

Invoices will be presented monthly by MSD to the FPU, supported by signed "proof of delivery" to district stores, and will thereafter be payable within 30 days of acceptance.

4. Liabilities Arising for Non-Fulfillment of the Memorandum Terms.

Where MSD fails to deliver a service to an agreed standard of performance—the levels of losses within the system, for example—the FPU will present an invoice with respect to the matter with support documentation. Like wise this invoice will also be payable within 30 days of acceptance.

5. Schedule One

MSD distribution costs for MCH/FPU contraceptive commodities from national to district level in Tanzania $133 per cubic meter payable in Tanzania Shillings at the prevailing exchange rate on the date of the payment.

Notes:

1. Volumes based on standard pack sizes of the respective contraceptives. To be reviewed and agreed between the FPU and MSD annually.

2. Terms of agreement contained in this schedule, to be reviewed and revised on defined dates annually.

B. Memorandum of Understanding—Logistics Management Information Systems (LMIS)

1. Background

The current information system of the Family Planning Unit has been affected by the health sector reforms. When the Request and Report (R&R) forms were introduced two years ago, a major training took place with FPLM support to ensure that Regional and District MCH coordinators were able to supervise the correct completion of these forms during their supervisory visits.

Under the health sector reforms, supervisory visits will be independent from the delivery visits. Also, districts and SDPs are experiencing a lack of regular visits. With the imminent integration of MCH/FPU's

distribution system to that of the MSD a strong and reliable information system is required which is responsive and accurate.

Using consumption data, it is proposed that—

- Districts requisition directly from zones, making the necessary monthly and bimonthly requisitions. A copy of the requisition should also be sent to the Regional MCH coordinator through the current reporting channels.
- The documents and reports required under such a system are outlined in the LMIS Reports and Documents Required Under the Proposed Integrated Distribution System.

The key documents for the success of the system are the R&R forms and the delivery/proof of delivery notes, which are used at all levels of the distribution pipeline.

It is proposed that there will be provision for the issue of requisitions at national level to compensate for instances of under-reporting at district level. Thus there will be provision for "push" as well as a "pull" replenishment mechanism.

C. Memorandum of Understanding—Organization and Staffing

Adequate human resources should be in place to ensure a smooth running of the integrated system. Under the new arrangement, MSD will be responsible for the appropriate manpower required to service FPU's logistics operations as specified in the MoU sections. At MCH/FPU a review of job descriptions and positions will be conducted under the new integrated system since there will be an overlap in functions between MSD and FPU and new activities will be required.

It is envisaged that a member of staff at MSD will have liaison responsibilities on a day to day basis with FPU. Duties should include but are not exclusive of—

- Acting as point of contact for day to day operational and administrative activities.
- Coordinate production and communication of reports between MSD and FPU.
- Provide initial point of contact for all monitoring and evaluation activities on behalf of MSD.
- Act on problems arising from this process.
- Identify any factors likely to impact on availability of contraceptives.
- Coordinate production of delivery schedules in conjunction with FPU.
- Provide input into the CPT bi-annual process and provide initial point of contact for coordination of invoices.
- Act as liaison between national and zonal levels.
- Coordinate physical inventories and make them available to FPU First line of contact for FPU communications during the transition period.

New functions will be added at FPU to ensure the smooth running of the integrated system, since FPU will relinquish direct operational control. This will mean establishing a new commercial relationship and much greater emphasis on distribution and communication.

Additionally responsibility needs to be apportioned for checking invoices and transaction documents generated by MSD to ensure that the charges for deliveries made up to district level are accurate and that the orders were picked and delivered according with FPU's instructions. This will be done through the input of the logistics and LMIS officers and their respective assistants.

Thus new tasks falling under the jurisdiction of FPU may be summarized as follows:

- To manage the transition of the supply of public sector contraceptives from an in-house public sector operation to an integrated third party commercial organization.
- To manage both the day-to-day and longer-term aspects of the relationship with MSD.
- To retain responsibility for producing and communicating to MSD on contraceptive distribution plans.
- To administer and advise the FPU program manager on periodic settlement of the MSD handling charge invoice.
- To oversee the production and follow-up associated with the annual Contraceptive Procurement Tables.
- To assist in establishing indicators and thereafter monitoring MSD performance.

It is understood that MSD will have sufficient human resources available to service the integrated system. The proposed roles and responsibilities can be found in Appendix D

D. Memorandum of Understanding—Procurement and Supply

1. Background

Procurement and supply of contraceptive commodities for the Tanzanian Family Planning Unit (FPU) consists of four activities: forecasting, procurement, monitoring shipments, and customs clearance.

At the beginning of the calendar year, the FPU logistics officer determines the balance of contraceptive supplies at the central warehouse and estimates the amount in the pipeline. With this information and technical assistance from FPLM, the CPT table projecting the annual demand for each contraceptive method is generated.

2. Procurement

Each donor representative procures the contraceptive commodities they have agreed to provide, based on their own procedures. USAID, for example, forwards the requirement to Contraceptive Logistics Management (CLM) which provides confirmation of quantities ordered and a shipping schedule. UNFPA contraceptive commodities are ordered through LTNFPA/New York, which provides the UNFPA representative with copies of the purchase orders they have issued to suppliers. Crown Agents, who provide the local DFID representative with a copy of the order, currently procure DFID and KfW supplied contraceptive commodities.

3. Monitoring shipments

Upon receiving shipping schedule information from their respective procurement groups, the local donor representatives forward a copy to the FPU logistics officer. This information is used to monitor the deliveries of contraceptives to the port, and on a few occasions to the airport in the case of small volume or emergency shipments. As the scheduled delivery date approaches, the FPU logistics officer follow-ups with the appropriate parties to determine if the shipment is on schedule. For USAID shipments follow-up is with Panalpina. Follow-up for DFID/KfW financed shipments is with Crown Agents, and for UNFPA shipments the FPU logistics officers contacts the local UNFPA office.

4. Customs clearance

All donor shipments of contraceptive commodities are "door to door" with the donor paying for port, freight forwarding, and transport fees. The FPU logistics officer assists each donor to obtain documentation needed to support a waiver from government duty and excise taxes. For USAID shipments a waiver from such fees has been included in the overall bi-lateral agreement between USAID and the Tanzanian government and therefore special documentation is not required. UNFPA shipments are consigned to the local UNFPA mission and the FPU program manager signs a UNFPA request for approval letter to assist UNPFA in obtaining a duty free declaration for customs clearance purposes. For DFID/KfW shipments the FPU logistics officer prepares a letter for the Minister of Health to sign confirming the contraceptive commodities are donations.

Once the commodities have cleared customs, the local freight forwarders handling the shipments contact the FPU logistics officer to schedule delivery to the Mikochem warehouse. Upon delivery to the warehouse, the FPU logistics officer, or his assistant, inspects the goods for compliance with the order and shipping damage. After the commodities have been received at the warehouse, the FPU logistics officer provides the donors with confirmation, as required, of receipt of goods.

5. Forecasting

The annual forecast process establishes the projected demand for contraceptives for the coming year. For this process to produce useful estimates under an integrated distribution system, it is important that FPU and MSD cooperate in requesting and providing data needed to develop the forecast. Under the integrated distribution system the Ministry of Health, to demonstrate its commitment to eventual self-sufficiency in contraceptive supply, will budget an initial amount, to be gradually increased over time, for the procurement of contraceptives. By the year 2001, they will be able to fully fund their annual contraceptive needs.

V. Memorandum of Understanding, Draft Finalized

A. Memorandum of Understanding (MoU)

The inclusive MoU contains both commercial and operational expectations of the Ministry of Health's Reproductive Child Health Unit, the National AIDS Control Program (NACP) and the Medical Stores.

It is recognized however, that the Ministry of Health will sign a document that will exclusively contained the MoU, i.e., the commercial terms and not the operational expectations. Therefore, the document has been revised and, in public consultation with stakeholders, amended.

1. Integration issues

Finance

The possibility of opening an impress account at the Reproductive Child Health Unit was explored together with the option of using a dormant account. In a meeting with donors and the Medical Stores Department (MSD) it was agreed that given the bureaucracy and cumbersome procedures, it was easier to make deposits directly into the Reproductive and Child Health Unit who in turn will deposit into the MSD/RCHU account. Monies for distribution will be deposited by donors on a quarterly basis and withdrawn by MSD upon the Ministry of Health's approval. It is expected that in the medium term, the Government of Tanzania will provide total or partial contribution towards the integrated distribution system (see table 1).

It was also agreed that MSD's charges for contraceptive commodities for storage and distribution of $133 per cubic meter will also apply to non-contraceptive commodities. The charges apply to routine deliveries as per John Snow Inc./Family Planning Logistics Management Report III, Dar-Es-Salaam, November 1997. The formula by which MSD arrived to $133 is in the Appendices.

Table 1. MSD-FPU Charges

		MSD charges in U.S.$	Current FPU costs in U.S.$
1. Volume	1,324 pallets		
2. Distribution Charges	Central to Zone	54,108	174,127
	Zone to District	68,536	139,418
	Total	**122,644**	**313,545**
3. Storage	Central	31,879	26,000
	Zonal	21,515	N/A
	Total	53,394	26,000
4. Total costs		**176,038**	**339,5451**
5. Cost per pallet		133	

Source: For the Reproductive Child Health Unit (formerly FPU): Tanzania 5-year contraceptive FPU warehouse requirements, June 1997 the Medical Stores Department provided charges column D–AMBA.

Note: FPU costs were calculated on the basis of Central to Region and Region to District.

To ease invoicing and approval of supplies distribution, however, it was suggested to charge per unit carton stored and distributed down to district level.

Unit cost per 1998 forecasted demand and current charges are—

Microgynon	$26.96 per carton of 2,640 cycles
Lo-Femenal	$14.43 per carton of 1,200 cycles
Microval	$8.33 per carton of 600 cycles
Depo-Provera®	$4.76 per carton of 100 vials
CUT 380A	$10.92 per carton of 200 IUDs
Conceptrol	$14.30 per carton for 4,800 units
Condoms	$16.05 per carton of 5,760 units
Neo-sampoon	$6.08 per carton of 3,200 units

Charges for Neo-sampoon were calculated on the basis of last year's volumes as the current volume is too small and there is no envisaged demand. In the case of Norplant®, no distribution charges will be incurred on, however, storage at central level will be charged at $24 per box as per MSD-FPU charges. In the event of higher volumes or packaging differing from the above, the unit costs will be reviewed.

RHU vehicles

The four 10-ton vehicles used to distribute commodities from Central to Regional level are envisaged to not be needed under the integrated system. For this reason, consultation with USAID, UNFPA, and the MOH will take place to decide their fate. If an agreement is reached to sell the vehicles and offer them to the MSD or any other organization, a commercial and technical valuation by a private dealer will take place in due course.

Mikocheni warehouse

The lease on the two units used for storage of contraceptive commodities and condoms for HIV/AIDS at Mikocheni will be renewed until such time as MSD has completed the refurbishment of their stores

(expected by December 1998). Given the time frame of the implementation, it might not be necessary to transfer the management of the stores to MSD.

B. National AIDS Control Programme (NACP) Logistics Operations

At this time, the NACP accepted integration of their condoms for HIV/AIDS prevention, already stored at the Reproductive Child Health Unit, into the MSD. Other related commodities will be integrated in due course. The following section describes NACP's logistics operations.

1. Background

NACP has been financially and technically supported by a number of donors throughout their existence, including WHO, NORAD, UNAIDS, UNDID, DFID, DANIDA, USAID, UNFPA, JICA GPA, UNICEF, CiDA, the Royal Netherlands Government, USAID, and the European Union. However, this level of support has not been enough to maintain all the activities NACP is involved in, therefore integration of their supply systems to that of the MSD will free them to concentrate on their core activities. This section documents the logistics operations of the NACP.

MSD has agreed to store and deliver the NACP commodities down to district level at the same cost quoted to Ministry of Health/Reproductive Health Unit (MOH/RHU) of $133 per cubic meter payable in Tanzania Shillings at the prevailing exchange rate on the date of payment. This rate applies to routine deliveries and is subject to an annual review.

A number of products form the core of their logistics operations and are described below.

Condoms

Condoms are donated by UNFPA and delivered directly to the MOH/RHU Mikocheni warehouse for storage. NACP has one 10-ton vehicle for distribution purposes and it is used to deliver to the regions. Since this commodity is partly managed at RHU it is envisaged that when integration of their supply system takes place, NACP condoms will also be integrated. According to the Average Condom Consumption per Month Reports of 1996 and 1997, they estimate monthly issues of 980,760 for 1997, making an annual total of 11,769,120 condoms. UNFPA is considering funding the distribution system at least for the foreseeable future and has requested an estimate of the likely distribution costs.

STD drugs

STD drugs are delivered directly to MSD for storage and distribution and funded by the European Union who also provides distribution funds as part of a two-year agreement. Volumes used are based on an estimate of 1,200,000 million episodes in Tanzania. As part of the numerous country reforms to strengthen the district level, it is envisaged that eventually, they would look after these operations.

HIV kits

HIV kits are typically used for diagnostic purposes, AIDS prevention, voluntary screening and blood safety (blood transfusions). However, due to NACP limited resources, the kits in Tanzania are exclusively used for blood safety purposes. As a result, a tight control on the consumption is made by providing proof of use to obtain new supplies. Good security and monitoring is needed since this commodity is commercially highly desirable. Cold chain storage is required and provided by MSD.

Currently 200,000 tests (a kit usually consists of 100, 192, or 576 tests depending on the kit) are distributed throughout the country. Unless there are more resources available from the donor community, this number is not expected to increase substantially. A shipment of kits is expected from JICA. In the past, other donors have contributed, such as the Netherlands Government, UNAIDS, USAID, and the Government of Tanzania. The distribution is funded by NORAD through a bilateral agreement, which will last until the end of 1998. Limited government funds are also available.

In efforts to utilize the kits for blood safety only it is necessary to explore options for accountability (such as a small charge or distribution cost reimbursement).

Other commodities

IEC materials such as postcards, leaflets, and newsletters are stored at NACP and its distribution supported by NORAD. Distribution is made through the NACP delivery vehicle or through public transport. Medical and laboratory supplies are also handled, to enable NACP provide a service to the community.

Other activities

Much support has been provided by donors. Some have concentrated their efforts in providing commodities as described above, but help has also been given to support NACP's program in other areas. USAID assists through NGOs capacity, communication, and STD control in the areas in which their project is operational. They have also provided the delivery vehicle and office equipment.

DANIDA has a bilateral arrangement to provide home-based care and counseling. They are also assisting in the documentation center that NACP is putting in place. GTZ is supporting a comprehensive HIV program in Mbeya and the Netherlands Government is developing interventions at district level in Mwanza region. DFID also contributes by channeling financial resources through UNAIDS.

VI. Transition Plan

A. Background

One of the main concerns in integrating is the timely and complete availability of information for report and requisition of contraceptives from Service Delivery Point (SDP) to district level. The transition plan has been reviewed to address the above concern and to ensure that at all stages of integration sufficient time and resources are allowed for dissemination, evaluation and operational ability.

A three-part transition plan has been agreed upon to implement the integration process nationally. The first stage will be intensive examination of the reporting and requisition process at one district, which will provide guidance on the new process to be used. The second stage is a four-month trial in Iringa zone, with the MSD Zonal Medical Stores doing an integrated distribution in several districts. The Third stage, learning from the first two, will be national level integration, using phased in integrated distribution.

1. Stage I. District study

A district study in Iringa will be conducted to understand the reporting mechanism from District to Regional level and to transfer this function to the Zonal Store Department. A single district will be examined to identify the responsible parties at the district level who would report and request supplies from the Zonal Medical Stores (ZMS). It is envisaged that lessons learned from this exercise will be disseminated to the districts in the Iringa Zone (Mbeya, Ruvuma, Rukwa, and Iringa regions).

2. Stage II. Iringa pilot

The second stage of integration will be to pilot the distribution system in the Iringa Zone which was chosen due to its accessibility from Dar-Es-Salaam. The stocks will be transferred from MOH regional level stores to the Iringa Zonal Medical Store, therefore, the MOH will deliver to the zone rather than to the four regions. It is anticipated that a four-month period is required to ascertain MSD's performance in delivering the contraceptives and SDP/District performance in reporting and requesting their contraceptive needs. This will provide ample time to deliver to district, prepare the R&Rs take them back to ZMS for compilation and supply for the following delivery. Once this cycle has been completed, all issues pertaining to reporting and delivery will be identified and addressed. An evaluation will be conducted prior to dissemination to the rest of the regions for total integration of the distribution operations.

3. Stage III. Integration

Once all the pending issues have been resolved as per the transition plan, and after extensive review, assessment and dissemination, it is expected that countrywide integration of the distribution system will take place sometime in the first half of 1999. It is envisaged the Reproductive Child Health Unit will take a leading role in the monitoring and evaluating MSD's performance on a regular basis as stockouts, overstocks, losses, and emergency shipments will be closely monitored.

VII. District-Level Study

The mechanics of commodity and information flow for reproductive and child health commodities were explored in Mufindi, one of the six districts of the Iringa Region. This area was chosen for its relative accessibility and distance from Dar-Es-Salaam for the impending partial integration in the Inringa Zone, which includes the Inringa, Ruvuma and Rukwa regions. The following summary of what was found during this study. For details of the study see Appendix G, on the Mufindi District Study.

Aside from visits to the zones, regions and district levels, one health center and four dispensaries were visited in Mufindi. Serious problems were identified which pleads for some districts to undertake service delivery point strengthening. In summary, all the facilities barely ordered for one month of stock and received less than requested, since the delivery vehicle was often not being loaded with what the SDPs had requested. The following recommendations were made to strengthen the district system and the integration transition.

1. Coordination and communication is required for the preparation of the district's supervisory schedule between the District Medical Officer (DMO), the Health Management Team (DHMT) and the transport officer.

2. The region and the district MCH coordinators should work together with the DMO to ensure three months of supply are calculated from current demand and to ensure the vehicle is loaded with quantities required (based on the Report and Request (R&R) forms).

3. Strengthen the district levels by providing logistics training to all members of the DHMT.

4. Districts to report directly to the Zonal Medical Stores Department (ZMSD) by sending the R&R forms with the MDS drivers upon delivery.

5. ZMSD to provide copies of R&R for to the RMCHs.

6. Districts to report bimonthly to the zone, with an increase maximum stock level of four months, and therefore, for the zone to deliver on a bimonthly basis.

Finally, next steps are suggested to ensure all districts in the Iringa zone are informed of the new operational structure, and proceed with the distribution of the regional stock, so that partial integration can take place without further delay.

VIII. Integrated Pilot Project Iringa Zone

A. MOH/RHU-MSD Zone/Region/District Orientation

The MOH/RHU logistics officer, the management information system officer and the former MCH coordinator for the Dodoma zone visited the Iringa zone. Each of them was in charge of one region including Iringa, Mbeya, Ruvuma and Rukwa. They covered all 22 districts. The visits were programmed during September and October and lasted two weeks on average. The objectives of the visit were—

- Training of the District Health Management Team (DHMT) in the logistics management system.
- Dissemination of the new operational structure to the districts in the Iringa zone transfer of the existing regional stocks to the district stores.

The team in their respective regions calculated four months of supply from issues and dispensed-to-user data and made arrangements for the stock to be moved to the districts.

Followed this exercise, it was reported no contraceptive stocks were held in Mbeya and Ruvuma. However, a small amount of stock remained in lringa and after four months of supply were sent to all four districts, considerable stocks remained in Rukwa.

1. Transfer of stocks

During a meeting held on 5 November between the Director of Distribution at MSD and the RHU Logistics Officer, it was agreed the stock remaining in Iringa region should be transferred with immediate effect to the zonal store. For the larger stock remaining in Rukwa region, the RHU logistics officer should advise the Rukwa MCH coordinator to release the stock to the ZMSD driver when he makes a delivery in December.

For this purpose transfer of stocks from the central level to the Medical Stores Department took place during the technical assistance visit. From the calculations on four months of stock, which the MOH team brought back from the field, a initial transfer of stocks was agreed between the parties (see table 2).

Table 2. Initial Transfer of Stocks to MSD

Product	Number of Cartons
Microgynon	72
Lo-Femenal	164
Microval	87
Depo-Provera®	1,000
Copper T	5
Neosampoon	4
Condoms	100[a]

Note: a. Condoms are currently out of stock

The stocks were collected from the RHU Mikocheni warehouse by MSD on 9 November and transferred to their zonal store in Iringa in time for their next delivery. Following the December delivery MSD will prepare an order for their zonal store and submit to the MOH/RHU for replenishment.

Condoms for NACP will also be included in the new MSD deliveries. NACP has a push system and gives five cartons of condoms to each region per quarter. Districts get 10 cartons each per quarter, thus, requiring 220 cartons. The NACP deputy program manager will communicate their requirements in writing to MSD.

2. Reporting procedures

In the absence of Report and Request Forms (R&R), the RHU data analyst prepared a delivery schedule for the month of December and submitted to MSD.

The MSD driver will collect the R&R forms when the delivery is made and will take them back to the zonal store. The Zonal Manager (ZMSD) will forward the original R&R form to the appropriate Regional MCH Coordinator by post and the second copy will be sent to the National Family Planning Program in Dar-Es-Salaam through MSD headquarters. The zonal store will make a copy for their own records.

If the R&R forms are not available at the time of delivery, the zonal manager will liaise with the Regional MCH coordinator who will gather the necessary information and or requirements from the districts and communicate them to the zonal manager.

In NACP case, the Deputy Program Manager will communicate their requirements for condoms for HIV/AIDS to MSD, until the Region and District AIDS coordinators utilize the same R&R mechanism. The role of the Region AIDS coordinator is the same as the Region MCH coordinator.

Throughout this process, assistance and support from the RHU should be present.

3. Finance

Both, USAID and UNFPA have reiterated their preparedness to meet 50% of the distribution costs each. They have consulted their finance departments and have no institutional constraints to either deposit the funds at RHU and to be paid to MSD payable in arrears after delivery is confirmed.

The Medical Stores Department will communicate with donors and RHU the amount required to cover the distribution costs for the Iringa pilot.

B. February 1999

In order for the initial integration of the Iringa zone to take place, the RCHU prepared a delivery matrix of commodities to be collected by MSD at RCHU's Mikocheni store and delivered to the districts involved from Iringa. The delivery matrix was prepare well over a month prior to the MDS envisaged delivery to enable them to organize collection of stocks and add the contraceptive delivery to their own deliveries.

At the time of collection of commodities, the Mikocheni store was short of Lo-Femenal and condoms and therefore they were not able to satisfy the requested amounts at the district level. However, since the first delivery, stocks of condoms are available and it is envisaged that the situation with the lack of Lo-Femenal had been resolved.

During the first week of December 1998 MSD delivered for the first time contraceptives and condoms for HIV/AIDs to Iringa, Mbeya, Ruvuma and Rukwa regions through their Zonal Medical Store Departments. As previously arranged, the MSD vehicle collected the R&R forms at the district level, where available, and collected stocks left at the regional level and thus, depleting stocks there.

The original R&R forms collected were forwarded to the to the appropriate Regional MCH coordinator by post and the second copy was sent to the National Family Planning Program in Dar-Es-Salaam through the MSD headquarters. The zonal stores made a copy for their own records.

The result of this initial exercise was an example of mutual cooperation and communications. The Iringa ZMSD manager monitored the R&Rs received and communicated with the Regional Mother and Child Health (RMCH) Coordinators of those regions where the R&R were missing. Most of them responded favorably with more reports, making this a very successful reporting exercise.

During a review meeting, the issue of lack of reporting was raised as the R&R required to base the next delivery were, in most cases, not there even though reports for the previous one or two months were usually available. The following procedures should take place at the ZMSD to decide on quantities for the district deliveries:

1. The amount to be delivered during the next distribution cycle is contained in that last R&R. If the vehicle visited a district in December, it should collect the forms for October. November and December and the next delivery should use the information in the December R&R form.

2. In the absence of the form, the zonal manager should make contact with the RMCH coordinator and ask her to contact the district and require them to send the form straight away.

3. If the form is not available, the zonal manager, in conjunction with the RMCH coordinator, should decide to send the same quantity as per the previous delivery.

This process will ensure that the districts are always well supplied within their parameters and requirements. MSD requested from the RCHU another delivery matrix for Iringa for those districts where the most recent R&R was not available and to make available contraceptive commodities at the central level for collection. The RCHU had responded to this request.

IX. Phase-In Plan for National Integration

It is the aim of all stakeholders to integrate the supply system by June 1999, when MSD conduct their third delivery of the year. During this time, the rest of the country needs to be oriented, stocks need to be transferred to the districts, regional stocks have to be depleted, and the central stock need to be transferred to MSD. T-4x10 10-ton trucks require a technical assessment and valuation to offer them to MSD and any other interested party.

Whilst the Iringa zone continues to have deliveries by MSD, a two-phase plan has been devised to integrate the country by June 1999.

A. Phase I Integration of the Dar-Es-Salaam and Mwanza Zones

Dar-Es-Salaam Zone: Dar-Es-Salaam City, Coast, Dodoma, and Morogoro regions.
Mwanza Zone: Mwanza, Kagera, Shinyanga, and Mara regions.

A letter will be sent by the Ministry of Health requesting the Regional and District MCH coordinators in these regions to conduct a physical inventory for all contraceptives in their stores and for the District MCH coordinator to determine months of supply. This information will be supplied to the central level, in a Report and Request (R&R) form no later than 31 December 1998. MSD will need both stock and orders by 1 March to enable them to make a delivery to Phase 1 zones in April 1999.

B. Phase II Integration of the Tabora, Mtwara and Tanga Zones

Tabora Zone:	Tabora, Kigoma, and Singida regions
Mtwara Zone:	Mtwara and Lindi regions
Tanga Zone:	Tanga, Kilimanjaro, and Arusha regions

During March 1999, the above three zones will be informed by letter as per Phase 1, unless the RHU decides to change this procedure. MSD should be in receipt of R&R and stocks by 1 May. The remaining stock in the MOH central store at Mikocheni, will also be transferred to MSD. Countrywide delivery will then start during the June 1999 delivery schedule.

C. Outstanding Issues

Aside from the transfer of stocks and dissemination of information to the DHMTs, a number of issues need to be resolved for the successful completion of the integrated health supplies as detailed in the Transition Plan (integrated Public Sector Supply Status, 1 March to 3 April 1998).

1. Vehicle disposal

Commercial valuation and technical assessment of RHU vehicles.

Vehicle disposal through MSD for credit on distribution costs. If this is not practical, the vehicles will be offered elsewhere.

2. Mikocheni warehouse

All contraceptive stock will be transferred to MSD by 1 May and, therefore, it is not envisaged to maintain the lease on the warehouse. Medical supplies and ancillary equipment held in the store, should also be transferred to MSD.

Redeployment of staff of current RHU staff following implementation.

This issue needs to be addressed by the RCHU. FPLM will provide assistance in redefining job descriptions.

3. Monitoring and evaluation

Design integration evaluation study using Tanzania Service Availability Survey (TSAS) 1996 and 1998 (when available).

Orient/train RHU/NACP staff in monitoring and evaluation.

Produce a monitoring and evaluation plan for the first six-month period.

Any other issues that may arise from integration.

X. Results of First, Full Year of National Integration

Note: In 1999 FPU changed its name to RCHS.

A. Product Delivered and Costs of Delivery

MSD has a central warehouse in Dar-Es-Salaam and seven zonal warehouses plus Mbeya as a service point. These supply the 20 Regions and 116 Districts in the country. The zonal warehouses supply the following regions:

Zone	Regions
Mwanza	Mwanza, Kagera, Mara, and Shinyanga
Tabora	Tabora, Singida, and Kigoma
Iringa	Iringa, Ruvuma, Mbeya, and Rukwa
Tanga	Tanga, Kilimanjaro and Arusha
Mtwara	Mtwara and Lindi
Dar South	Dar-Es-Salaam City, Coast, Dodoma, and Morogoro
Moshi	Kilimanjaro and Arusha

RCHS determines stock levels for MSD to store at its central warehouse, and these are usually maintained between the pre-established minimum and maximum inventory levels of 11 months and 20 months, respectively. Replenishing stock levels at the zonal warehouse to maintain minimum and maximum inventory levels is not specified by the MoU and is at the discretion of internal MSD management. Nonetheless, zonal warehouses must always have sufficient quantities of contraceptives with which to re-supply districts.

MSD distributes contraceptives according to a pre-determined schedule based on the delivery plan for essential drug kits. Zones deliver commodities to districts every two months. If, for some reason, EDP kits are delayed from leaving the zones, MSD must still deliver contraceptives according to the original schedule. Before leaving on the distribution visits, MSD zonal managers are supposed to receive R&R reports from all districts serviced by the zone and use the quantities ordered on the form to resupply districts. At the time of delivery, MSD is supposed to pick up R&Rs from district MCH coordinators. If at the time of delivery, MSD has not received a current R&R, the policy is to use the previous R&R received and repeat the quantity ordered previously, after consultations with the Regional MCH coordinator.

1. MSD currently provides RCHS with three sources of information.

Quarterly reports from MSD central office (headquarters)

- This provides data on stock balances, quantities received, quantities distributed, and expiry dates for all contraceptives held at MSD

Bimonthly distribution and cost reports (from MSD headquarters)

- This is accompanied by an invoice and proof of delivery and summarizes costs and quantities distributed by zones

Bimonthly MSD zonal reports

- A cover letter accompanies copies of all the R&R forms collected during the distribution schedule. Information on the letter varies according to the zone and is not standardized

B. Issues Emerging

Currently, however, RCHS has no mechanism or tool to assess progress in attaining the goals outlined in the MoU or MSD's performance as per the contractual requirements. The need for such a system is evident; results from the April 1999 Situational Assessment of Public Health Logistics Systems suggested that MSD services do not meet all of RCHS' needs. RCHS identified development of a monitoring system to measure MSD's performance according to its contractual obligations as a priority.

RCHS's decision to contract out its storage and distribution functions to MSD represents the first time the unit has outsourced responsibility for any logistics functions. Consequently, a precedent for how it should manage the outsourcing partnership with MSD does not exist. Research has shown that failures in outsourcing partnerships are usually a result of poor communications, lack of top management support, lack of trust, poor up-front planning, lack of strategic direction for the partnership and lack of shared goals[1]. Usually, the cause of conflict can fall into either of two general categories:

1. A mismatch in perception over the appropriate degree of partnering; or

2. Improperly executing the partnership building process

Before developing a monitoring tool, it was important to clarify RCHS' goals and expectations regarding the purpose of the monitoring system and the intended utility of the information gathered by such a system. RCHS identified the following goals:

1. Establish a feedback mechanism between MSD and RCHS to ensure—
   - Frequent information sharing about quantities distributed to districts by MSD and the costs to RCHS for these services.
   - Problems in storage and distribution of contraceptives are addressed rapidly and effectively.

2. Promote rapid response to requests, questions, or complaints raised by RCHS to MSD.

RCHS' goals, at this time, are focused on improving the working relationship between itself and MSD to ensure open and regular information exchange so that logistics problems can be rapidly addressed. Although developing a formal monitoring system to measure contractual compliance is still a long-term goal, its implementation is more likely to be assured after the following three issues have been addressed:

- Building the foundation for an open and two-way channel of communication between RCHS and MSD.

[1] Lambert D, M. Emmelhainz and J. Gardner. 1999. "Building Successful Logistics Partnerships" in *Journal of Business Logistics*; vol. 20 (no. 1) p 165-181.

- Determining the nature of information that RCHS would like to collect to assess MSD performance, and developing corresponding indicators.

- Ensuring that RCHS has a viable system for data entry and analysis to allow information from the MSD monitoring tool to be used for decision making, and to provide feedback.

As a first step towards establishing open channels of communication, RCHS and MSD met to discuss the nature of data exchanged and the best means through which information can be shared. MSD expressed its commitment to customer service and to transparency of its operations to build confidence in RCHS and other customers.

Both RCHS and MSD agreed that there was a need for more open channels of communication. The consensus was that issues raised by RCHS need not be limited to written correspondence, and both parties should engage in ongoing verbal communication to ensure timely resolution of these issues.

In addition to agreeing on enhanced communication efforts, RCHS and MSD will implement the following changes to current practices:

1. MSD will add a column for months of supply (MOS) on the spreadsheet attached to the MSD Quarterly Reports, beginning with the December 2000 report.

2. MSD will communicate with zonal warehouse managers to amend the MSD zonal report in the following way beginning with the September 2000 reports:
   - Standardizing the cover letter which accompanies R&Rs sent on a bimonthly basis (see Appendix A).
   - Including a spreadsheet from the zone dividing distribution information by product and district.

3. MSD will share with RCHS the full results pertaining to family planning products of the annual stock taking exercise, including quantities of losses, and discrepancies between physical and book counts. MSD will also share similar results from ongoing cycle counting that it conducts for family planning products. If losses are present, RCHS and MSD will jointly discuss what levels are acceptable and at what levels to compensate RCHS.

4. RCHS will follow up with its financial department to determine why MSD has not received timely payment for services and to expedite payment for backdated charges.

5. Both RCHS and MSD will try to obtain financial updates from their financial counterparts routinely to prevent such a circumstance from reoccurring.

6. RCHS will make efforts to be more timely in disposing of expired or condemned products stored at MSD.

Obtaining standardized information from MSD is a first step towards RCHS developing indicators for monitoring MSD performance. In the meantime, RCHS capacity for aggregating and analyzing data will be assessed to ensure that once monitoring indicators are developed and the system implemented, there is capacity to use the information for decision making.

1. Costs for contraceptive storage and distribution by MSD July 1999–June 2000

Background

The Memorandum of Understanding (MoU) between RCHS and MSD requires the commercial terms of the contract to be reviewed and revised annually (MoU, Appendix A). In theory, the review of costs for the first year should include an analysis of cost savings achieved by contracting out storage and distribution services to MSD. However, this will prove difficult to determine for the following reasons:

1. A costing of the previous vertical storage and distribution system does not appear to have been conducted, or if it was done, documentation has not been found

2. The components of the vertical system are not directly comparable to those of the integrated system (MSD delivers to districts, while the previous system delivered products to regions).

Although the comparison is not possible at this time, based on the description of vertical program costs (listed below), it appears as though contracting out storage and distribution services to MSD has indeed resulted in cost savings for RCHS.

Vertical delivery system costs

Previously, family planning products were stored in a central warehouse—separate from those for essential drugs and vaccines—which was rented using funds from USAID. USAID also covered all operational costs for the warehouse, including utility costs, security costs and personnel costs. Three operational trucks at the central level—two of which were donated by USAID and one by UNFPA—were used to transport commodities to the regional warehouses. Maintenance, fuel costs and drivers' salaries and per diems for each of the three vehicles were provided by the organization that donated them. Once commodities were delivered to regions, storage and distribution responsibilities were passed onto the Regional and District MCH coordinators. USAID had donated one 4WD vehicle for each of the 20 regions for distribution of contraceptives and vaccines. Maintenance and fuel costs for these regional vehicles, as well as salary and per diem for drivers were covered by DANIDA, as part of its funding for the EPI program.

Costs for integrated storage and distribution by MSD

As part of the MoU, MSD's charges include the following costs:

- Central level storage for all family planning commodities.
- Zonal level storage for all family planning commodities.
- Central to zonal to district-level distribution costs for all family planning commodities ordered by district MCH coordinators using the R&R forms.

Under the terms of the MoU, the above costs were to be split equally (50%–50%) between USAID and UNFPA, the two major donors for contraceptive commodities.

Information on costs and distribution by MSD was obtained for the 12 month period from July 1999–June 2000. This is summarized in table 3.

Table 3. Quantities Distributed and Storage Costs U.S.$ for Contraceptives July 1999–June 2000

	Product	Unit of issue	Actual units distributed	No. of cartons distributed	Charges per carton	Total charges
1	Microgynon	Cycles	2,402,400	910	26.96	24,533.60
2	Microval	Cycles	381,600	636	8.33	5,297.88
3	Lo-Femenal	Cycles	1,658,400	1,382	16.09	22,236.38
4	Depo-Provera®	Vials	1,509,175	15,092	4.75	71,687.00
5	Condoms	Each	7,367,010	1,169	16.09	18,809.21
6	Copper T	B/25	10,325	413	1.37	565.81
	TOTALS		**13,328,910**	**19,602**		**143,129.88**

Source: MSD, July 2000.

On average, the cost per unit distributed was $0.01 and the cost per carton distributed was $7.3.

Condoms accounted for the majority (55.3%) of total units distributed, which corresponded to 13.1% of total costs. Microgynon and Lo-Femenal were second and third, respectively, accounting for 18% and 12.4% of total units distributed, which corresponded to 17.1% and 15.5%, respectively, of overall costs. Although the charge per carton is higher for Microgynon than for Lo-Femenal, both products cost the same per unit to distribute: Microgynon costs $0.010 per unit versus Lo-Femenal, which costs $0.013 per unit.

The most costly item to distribute is Depo-Provera®. Charges for distributing Depo-Provera® accounted for 50.1% of total costs although Depo-Provera® only accounted for 11.3% of total units distributed. However, Depo-Provera® accounted for 77% of the volume of cartons distributed, suggesting that although cost per carton of Depo-Provera® is low, a large number of cartons must be distributed to meet demand.

Breakdown of payments by donors

As of August 25, 2000, RCHS had paid a total of US$ 77,997.4 (TShs. 62,397,951) to MSD[2]. There are still outstanding payments in the amount of $65,132.48 (TShs. 52,105,984) that have yet to be paid for the period from July 1999–June 2000.

The breakdown of costs between donors for this amount was as follows:

- USAID has paid for 57.1%, or $44,525.53 (TShs. 35,620,423.00)
- UNFPA has paid for 42.9%, or $33,471.91 (TShs. 26,777,528.9)

C. Stock Volumes Reduced with Improved Delivery

One direct benefit of the integrated nation delivery system was that stock levels of contraceptive supplies were reduced. With improved reliability of delivery and a standardized delivery schedule, with the

[2] Exchange rate used of U.S.$ = TShs. 800

possibility of quick emergency deliveries to the District level if necessary, the amount of stock needed as a reserve in country could be reduced.

Previously, contraceptive stocks for Tanzania were projected at a maximum level of 25 months of supply-on-hand needed in country. This provided a reserve in case of shipment delays from abroad, increased demand and distribution inefficiencies. With improved delivery through the MSD system, and with improved port and customs clearances, The RCHS made the technical decision that reserves could be dropped from a maximum level of 25 months, to a level of 20 months.

In practical terms, this meant less money tied up in commodity purchases sitting as a reserve in warehouses and less warehouse space needed since the volume was reduced, and less concern about possible product expiration since a smaller volume was held in country and therefore turned over faster. While the improved delivery system was not the only factor in this decision by the MOH, it certainly was a major one.

D. Integration Experiences Shared Regionally

With an integrated and improved distribution service through the MSD in place and functioning reasonably well at a national level, other countries around East Africa were interested to learn how this was done in Tanzania.

In February 2000, WHO and FPLM/RLI organized a one-week study tour to Tanzania to visit the Medical Stores Department and the RCHS. A 6 person team including senior staff from the Medical Stores Coordinating Unit (MSCU) of Kenya and Dr. Gachara of the FPLM Regional Logistics team visited the MSD central warehouses, meet with senior MSD staff, reviewed distribution and information systems and visited several MSD Zonal warehouses. This provided them solid background during the planning stages to transform MSCU into KEMSA, an MSD-like parasatal in Kenya. Dr. Margaret Gachara of the FPLM Regional Logistics Initiative based in Nairobi accompanied this team to Dar-Es-Salaam. A copy of this team's study tour report is included as an appendix.

Now that KEMSA has been gazetted in Kenya and will start operations shortly, we expect this type of south-to-south sharing of experience to increase.

In July 2000, a logistics team from Madagascar visited the MSD in Tanzania and the Central Medical Stores unit in Botswana. The purpose of this visit was also to examine the impact of an integrated system, with family planning commodities added to over health supply distribution.

With integrated systems being actively promoted now in Uganda, Kenya, and Mozambique, as well as Tanzania, we expect this type of information exchange to increase. MSD is further along in this process than some other countries and is prepared to share their practical experience in things to do and things to avoid around the region. We hope that this report will contribute to that dissemination of information.

E. Information from National District Level Assessment Survey

In April/May 2000, a joint team consisting of the RCHS, EPI, CTU, and FPLM conducted a nation assessment of logistics distribution status from the District level to the service delivery point (SDP.) This full report is now available from the RCHS, but a few key points are presented here.

Essentially, the survey team found that if products reached the District level, generally they somehow made their way to the SDP though the initiative of local officers. The team also found that family

planning commodities were the most widely disbursed, with vaccines having the next highest level and essential drugs third. Some problems were identified in product distribution, particularly in several specific vaccines, but the reasons for this are being investigated.

XI. Next Steps

A. Improve Information Exchange

In the interim period during which the Medical Stores Department (MSD) is updating its procedures to provide RCHS with more and consistent data on a routine basis, RCHS should begin identifying the type of information that it would like to collect to assess MSD performance. The data identified is not intended to monitor MSD performance but rather to enhance RCHS' ability to monitor the logistics system performance. As RCHS continues to work with MSD, it should monitor areas in which MSD performance can be improved and consequently identify the types of information that would allow monitoring of this performance. A basic tool for aiding this process is attached as Appendix B.

Concurrently, RCHS should continue to take steps to build a more open relationship between itself and MSD. Suggestions for how this should be done are included in the recommendations from the August Logistics Stakeholders Meeting Report, available from the RCHS.

B. Improve Monitoring System

One of the recommendations arising from the assessment team visit was to improve monitoring of delivery of all medical supply products though the MSD system. Part of this includes improved communications between the MSD and RCHS, but it also involves formalizing an oversight function by the MOH on MSD delivery performance.

Discussions had started on this issue between the MSD and RCHS, based on the MoU provision for periodic review and adjustments to the system. MSD and RCHS have already made mutually agreeable changes to the information collected and shared in the quarterly reports. This information will help RCHS do its procurement planning more efficiently.

This process has been started. Other issues might include District level satisfaction, based on timeliness and correct fulfillment of orders, and periodic monitoring of general client satisfaction of MSD-provided services. RCHS must also be prepared and have the resources to process and analysis this additional information so that it might be used to improve services.

C. Review Financial Structures

The MoU between the MSD and the RCHS calls for an annual review of distribution costs. Another tenant of this mutual relationship is that invoices from the MSD must be presented in a timely manner and that they must be paid by RCHS in a timely manner. This process is under review by the two partners to ensure timely action on both sides. MSD is ultimately a commercial venture and requires timely cash flow. It is important that both partners keep this in mind.

D. Improve Request Procedures from District Level

The old adage about a chain being only so strong as its weakest link also applies to the non-physical supply chain. The integrated distribution system run by MSD takes information provided by the District level logistics information system and uses this to tell the MSD supply chain to provide a certain level of required supplies back to the District level. If this SDP to District level request system is not providing

the required information, or is not providing it in a timely manner, then even the perfect distribution system supplied with incorrect information, will provide an incorrect amount of product to the District level.

When this integrated system was first proposed, FPLM assisted with a detailed review of the then existing request system from the District level in 1997. With the National Assessment Survey conducted in April 2000, there is also additional information now available on the existing capability of collecting, processing and transferring this information needed.

Not unexpectedly, there is room for improvement. This is a difficult process, there are several different agents collecting and preparing information to trigger product disbursement, and most of this training was conducted long ago. With the increased push for decentralized decision making, this information analysis at the District level of information collected from the SDP level becomes more and more important.

The RCHS, and USAID through the new DELIVER Project, is committed to improving this product request system and providing the best information on a timely basis to the MSD. This will likely include logistics issues to be included in District level regular supervision and monitoring, and on-the-job training aides for District and SDP staff to accurately complete forms and to provide needed information.

Much of the focus in the past few years has been on integrating family planning commodities with other health product distribution from the national to the District level through the MSD. In the next cycle, the key focus will be on improving the District level to SDP level information and product flow.

E. Summary

Through review of this integration process we have seen that product delivery has improved and that distribution costs have been cut in half. This is a real achievement for the first year of full, national integration.

Improvements in the system can be made and the process to do so has started. The next cycle of activity is to reinforce this working integration partnership and then to improve information and product flow all the way from the Service Delivery Point to the national level. With the example of family product integration as a guide and commitment from the Ministry of Health and the MSD, plus support from the donors and possible technical back up from the Deliver Project, these objectives can be reached in the next few years.

Appendix A
Memorandum of Understanding

A. Introduction

The provision of a supply network from National to District level by the Medical Stores Department (MSD) for the Ministry of Health (MOH) is dependent on goodwill and flexibility on behalf of both parties. This Memorandum of Understanding (MoU) seeks to establish minimum commercial requirements and expectations and pertains primarily to commodities (contraceptive, medical equipment, and *ad hoc* donations) previously distributed by the Reproductive Child Health Unit (formerly Family Planning Unit, FPU) and the National AIDS Control Program (NACP) both part of the MOH.

Thus the terms contained herein are the commercial conditions under which the Memorandum will be implemented (the outline of operational expectations can be found on the JSI/FPLM report Integrated Public Sector Supply Status Report III, November 1997). It is anticipated that the commercial terms will be reviewed and revised annually. It should be noted that at all times between MSD receiving and delivering contraceptive commodities, medical equipment and ad hoc donations, title of such commodities is retained by the MOH.

The integration of the MOH's Reproductive Child Health Unit and the National AIDS Control Program related commodities into the MSD distribution system is an integral part of the MOH's overall health sector reform program, which aims to rationalize and decentralize health service delivery. Integration will streamline distribution where cost savings be accrued, in addition, the integrating programs will be relieved from the logistic functions, thus allowing them to concentrate resources on their core functions.

It is to be expected that all issues relating to the discharge of responsibilities for fulfilling the terms of the Memorandum will be resolved between the MOH and MSD. Ultimately, the MoU will be executed in accordance with the prevailing laws of Tanzania.

B. Finance

1. Background

MSD will charge a rate of $133.00 per cubic meter for storage and distribution payable in Tanzania shillings at the prevailing exchange rate on the date of payment and is applicable for the distribution of public sector contraceptives and related medical equipment from the national to the district level in Tanzania. The charges cover routine deliveries; emergency shipments will be charged at prevailing commercial rates based on MSD's standard hiring charges. The service will be payable in arrears after delivery is confirmed.

2. Payment mechanisms

Deposits will be made directly by the donors to the MOH into the Reproductive Child Health Unit and NACP, which, in turn, will make deposits into their own accounts at MSD. These will be made quarterly according to need and in accordance with schedules agreed between the relevant donors and the MOH. The accounts will be maintained at a predetermined level agreed between MSD and the MOH based on the projected value of throughput of the contraceptives and other medical supplies.

3. Invoice cycle

Invoices will be presented after deliveries have been made and not more than on a quarterly basis by MSD to the MOH, supported by signed "proof of delivery" to district stores, and upon authorization, invoice charges from the MOH accounts will be deducted within 30 days of acceptance.

4. Liabilities arising from non-fulfillment of the memorandum terms

Where MSD fail to deliver a service due to negligence, the MOH will present an invoice with respect to the matter with support documentation to the MSD to compensate for non delivery. Likewise this invoice will also be payable within 30 days of acceptance.

C. Organization and Staffing

MSD will be responsible for the appropriate manpower required to service MOH's logistics operations as specified in the MoU sections. At the Reproductive Child Health Unit and NACP an internal review of job descriptions and positions will be conducted to ensure a high degree of competence and efficiency placing greater emphasis on distribution and communication.

D. Logistics Management Information Systems (LMIS)

A strong and reliable information system is required which is responsive and accurate. Utilizing consumption data, it is envisaged that—

Districts requisition directly from zones, making the necessary monthly/bimonthly requisitions. A copy of the requisition should also be sent to the Regional MOH coordinator through the current reporting channels.

The key documents for the success of the system are the Report and Request (R&R) forms and the delivery/proof of delivery notes which are used at all levels of the distribution pipeline. It is proposed there will be provision for the issue of requisitions at national level to compensate for instances of under-reporting or lack of reporting at district level at least during the pilot period. Thus there will be provision for "push" as well as "pull" replenishment mechanism.

E. Procurement and Supply

1. Forecasting

To produce annual projected demand for contraceptives and related medical supplies under an integrated distribution system, it is important that MOH and MSD collaborate in requesting and providing data needed to develop the forecast.

1.1. Role of MOH

- Using data from R&R forms, previous Contraceptive Procurement Tables (CPT) and MSD stock level reports, prepare an annual estimate of contraceptive requirements, and related medical supplies in collaboration with MSD.

- At the beginning of the year (or as soon as practicable), convene and chair meeting of donors to review and approve the annual forecast and secure donor pledges for requisitions for the forthcoming year.
- Inform MSD of quantity of contraceptives and related medical supplies to pass through the delivery system during the coming year.

1.2. Role of MSD

- Provide MOH with stock level reports, as required, to support annual forecast process and collaborate in the annual contraceptive requirement and related medical supplies exercise.
- Plan for the storage and distribution of the forecasted quantities.

2. Procurement

Procurement and delivery to be made in a timely manner to ensure there is no disruption to the supply pipeline. Under the integrated distribution system, donors will continue to procure contraceptives through their own procurement services or designated agencies.

2.1. Role of MOH

In the long term, issue requisition to MSD for commodity purchase funded by MOH.

2.2. Role of MSD

- Provide donors with any documentation or letters of approval required by donors to initiate commodity procurement.
- Procure commodities funded by MOH in accordance with MSD procurement procedures.

Note: MSD's procurement role vis-a-vis donor-funded contraceptives will be reviewed one year after integration.

3. Monitoring shipments

MOH's primary responsibility will be to monitor the delivery of contraceptives and other related medical supply shipments from suppliers, with assistance from donors in expediting deliveries or late shipping documents as required. In addition, the MOH will continue to liaise with donors to monitor procurement and clearing of commodities.

3.1. Role of MOH

- Support MSD in their work with donors to expedite delayed shipments or shipping documents.

3.2. Role of MSD

- Review shipping schedules provided by donors and follow up with donors as originally scheduled ship date approaches to confirm dates.

- Monitor donor shipping schedules to plan receipt of shipping documents and notify donors and MOH of any delay in receiving the documents.
- Provide MOH with a copy of order and shipping schedule for any commodities ordered on their behalf.

4. Customs clearance

Following a favorable evaluation of the initial integrated distribution system, transferring responsibilities for customs clearance to MSD will be reviewed by the donors. If a decision is made for MSD to assume these responsibilities, they will be performed as described below at standard MSD charges which are published and available.

4.1. Role of MOH

- Review proof of delivery and invoices for customs clearance services submitted by MSD.

4.2. Role of MSD

- Obtain any customs documentation required by donors from MOH.
- Clear goods through customs.
- Deliver goods to national warehouse, receive and inspect goods.
- Provide MOH with proof of delivery to warehouse and inspection report.
- Submit paid invoices for customs clearance services along with MSD charges to MOH for reimbursement.
- Provide donors with receiving reports and delivery confirmation, as required.

F. Monitoring and Evaluation

1. Background

After the integration of contraceptives and related medical supplies into the MSD distribution system, MOH will retain overall responsibility for contraceptive and related medical supply logistics, and therefore will continue to carry out its broad logistics monitoring and evaluation functions. With regard to distribution from central to district level, however, the MOH will now be monitoring and evaluating MSD's performance together with other stakeholders, such as the donor community.

2. Monitoring contraceptive quantities

The primary objective in quantity monitoring will be to ensure that adequate stock levels of contraceptives are available at district stores.

2.1. Role of MOH

- Monitor stock levels at the central warehouse and district stores through reviewing field data and making site visits. Ensuring district level stocks remain within the established min/max range.

- Conduct mini-stock level surveys (stockout surveys); and document, report, and address any supply problems.

2.2. Role of MSD

- Ensure zonal stores have enough supply to ensure timely deliveries of required quantities to district level.
- Closely collaborate with MOH and respond promptly to contraceptive or related medical supply issues/problems raised by them.
- (a) Provide MOH with a. stock movements from zone to district (date, items, quantity, location); (b) annual delivery schedules from zone to district stores; (c) signed proofs of delivery from the district in-charge; and (d) report on losses, stockouts and overstocks, and non-reporting or incomplete reporting from districts.
- Hand-carry MOH requisitions from district level to zone warehouse (MSD drivers will pick up requisitions as available when delivering to districts).

3. Monitoring logistics quality

The MOH will carry out monitoring functions to ensure that MSD follows good stores practices and handles contraceptives in a manner that ensures service providers have quality contraceptives and related medical supplies to dispense to clients. MSD will not be responsible with storage or distribution of commodities at the district level or below.

3.1. Role of MOH

- Make inspection visits to the central and zonal warehouses operated by MSD. Observe storage conditions, shelf life and expiry dates, loading and handling procedures, inventory control, etc. Use standard checklist during such visits and provide MSD with a copy.
- Interview MOH district level and SDP staff regularly, to determine—
  - satisfaction of provision of MSD's services, and
  - assessment of the condition and availability of contraceptives and related medical supplies, a written summary provided to MSD.
- Monitor information and commodity flows between the district and the zone and central levels.
- Convene regular meetings with MSD; participate in joint MSD/MOH field visits.

3.2. Role of MSD

- Allow MOH access to the central and zone warehouses, and collaborate in the inspection of contraceptives and related medical supplies in storage, logistics records, etc.
- Cooperate with MOH in any special studies/surveys aimed at assessing and improving contraceptive and related medical supply distribution.
- Convene regular meetings with MOH for coordination, discussion and resolution of distribution issues. Participate in joint MSD/MOH field visits as required.

4. Monitoring logistics costs

Integration is expected to result in cost savings. Consequently, MOH is required to monitor and report costs carefully to the donors.

4.1. Role of MOH

- Track distribution costs and prepare a quarterly report that compares costs with quantities handled. Show expenditure trends.
- Monitor loss/wastage by tracking quantities received by MSD at central level and quantities delivered out of the system at district level. Prepare annual reports for MSD showing loss/wastage in conjunction with the annual CPTs.
- Monitor emergency shipments due to lack or incomplete reporting.

4.2. Role of MSD

- Provide MOH with—
  - Invoices showing costs broken down according to an agreed format
  - Reports of commodity loss/wastage
  - Reports of non-delivery (due to weather conditions, unavailability of commodities, etc.)
  - Emergency shipments report.

5. Formal evaluation of distribution integration

Given that the MOH intends to integrate its numerous vertical distribution systems, a formal evaluation of contraceptive and related medical supply availability will be conducted after six months of initiating the country wide integration process, to provide lessons learned that will guide future integration. The MOH will design and carry out this evaluation with financial and technical assistance from donors, the evaluation study is likely to focus on areas such as—

1. Reliability and continuity of contraceptive and related medical supply before and after integration.
2. Distribution costs before and after integration
3. Customer's satisfaction with availability of commodities before and after integration
4. Report and request (R&R) compliance.

In addition, the Research, Monitoring and Evaluation Unit of RHU will carry out a comparative study on the Tanzania Service Availability Surveys (TSAS) for 1996 and 1998 to provide a measurement of availability of contraceptive and medical commodities at the service delivery point level. The 1996 TSAS was produced in December 1997, and it is expected that by mid-1999 performance indicators for 1998 be available.

5.1. Role of MOH

- Design the distribution evaluation study and establish a baseline against which to measure MSD's performance. The Tanzania Service Availability Surveys of 1996 is an ideal source of baseline data on stock levels.
- Conduct the evaluation study of the integration of reproductive and child health related commodities into the MSD distribution system.
- Facilitate a dissemination meeting to present the findings of the study.

5.2. Role of MSD

- Collaborate with distribution study by providing MOH with logistics and financial data related to reproductive child health related commodities.
- Participate in the dissemination meeting at the conclusion of the study.
- Identify seasonal determinants, for example, which affect accessibility. All such variations to routine delivery schedules will be reviewed and agreed with the MOH beforehand in an exercise conducted at least one per year.

G. Transport

1. Background

The MSD fleet currently makes regular deliveries to the zonal stores and scheduled deliveries at regular intervals thereafter to the Districts. It is intended that contraceptive commodities and related medical supplies be incorporated into an integrated delivery schedule leading to mutually beneficial commercial and operational arrangements for the MOH and MSD.

2. Delivery schedules

MSD will ensure the provision of transport for contraceptives commodities and related medical supplies between the national warehouse at Dar-Es-Salaam and the zonal warehouses and thereafter between the Zonal warehouses and the respective District stores.

The deliveries between the national and zonal levels will be made at the discretion of MSD but will be conducted in such a manner as to satisfy demand at district level. In any event, it is anticipated that at least one delivery will be made to each zonal store at intervals of no less than once per month.

Delivery schedules between the zones and the Districts will, where possible, be agreed in advance between MSD, the MOH, and the Districts in question, such that the contraceptives shipments may be consolidated with other commodities. It is anticipated that such deliveries will be made monthly, but there may be variations occasioned by seasonal determinants, for example, which affect accessibility. All such variations to routine delivery schedules will be reviewed and agreed with the MOH beforehand.

3. Dedicated deliveries

Where necessary, MSD will perform deliveries dedicated to contraceptive commodities, or related medical supplies to meet specific demand. This might be an emergency delivery occasioned by a stock out at national level or a "one-off" delivery of donated items.

Where the delivery is necessary because of specific requirements, the MOH will meet the full costs of such deliveries (as per the finance section). Where the requirement is occasioned through MSD's failure to address their operational responsibilities, they will meet the cost of the dedicated delivery(s) in full.

4. Support documentation

Deliveries will be completed with MSD's standard documentation which is expected to fulfill all current statutory requirements relating to road transportation of freight in Tanzania.

5. Storage conditions

Whilst in transit, MSD will take all reasonable precautions to ensure the contraceptive commodities and related medical supplies are stored in such a manner that there are no losses or damages due to poor environmental conditions or handling procedures. MSD will undertake to compensate the MOH in full where there are contraceptive commodity losses caused by willful negligence on their part in addressing the above.

6. Collections

Where it is necessary for commodities to be collected either from airports or seaports in Dar-Es-Salaam, and delivered to the National stores, such collections will be organized by MSD and charged to the MOH at prevailing commercial rates or otherwise, commodities might be collected by MOH and handled to MSD for distribution.

7. Returns

Where commodity returns are necessary either between the District and Zonal stores, or the Zonal and National stores, these will be completed by MSD at the request of members of the District Health Management Team (DHMT) or the MOH at a charge of 25% of the current MSD's unit cost distribution agreement. The MOH and MSD will collaborate to produce the necessary supporting documentation for the delivery of the returned items.

8. Insurance

The MOH will retain title to the contraceptive commodities and related medical supplies but whilst in the jurisdiction of MSD, including under transportation, MSD will ensure full provision of compensation against loss through fire, accidental damage or theft.

H. Storage

1. Access by MOH staff

MSD will meet all reasonable requests by MOH for access on behalf of themselves and/or their staff to the contraceptives commodities and related medical supplies being stored on their behalf. In making such visits, the MOH staff will act in accordance with such security procedures as MSD apply to visitors to their premises. Where practical, advance notice of their arrival should be provided.

Where such visits require removal of samples by the MOH, MSD will afford every assistance to all such reasonable requests. MOH personnel will follow MSD administrative procedures in such matters.

2. Audit procedures

MSD will meet the statutory Government requirements to be audited annually, and will be expected to fulfill this task through the services of external auditors. MSD will liaise fully with the MOH and the donor community regarding the timing and execution of the task and the MOH will be invited to witness and review proceedings, in addition to sharing the output of the audit.

Additionally, MSD will be required to produce data periodically regarding contraceptive commodities and related medical supplies under their jurisdiction. Such data will be of a reasonable level of accuracy to satisfy both the MSD and the MOH auditors and will be supported by such measures - including perpetual inventory and additional periodic stock takes - as are necessary to produce a satisfactory level of data integrity.

3. Disposals

Responsibility for the administration of the disposal of contraceptive commodities and related medical supplies through established procedures remains with the MOH. Operationally, MSD will provide such assistance as is required to achieve this. Where there is a cost implication, such as transport of commodities to the disposal site, MSD will provide assistance at a reasonable rate negotiated with the MOH as determined by the requirements of each operation.

In instances where MSD have been negligent, for example by failure to identify expiring stock, there will be no cost implication to the MOH in administering the disposals procedure, including the storage and transportation of the expired stock. In addition MSD will undertake to compensate the MOH for any financial losses so caused.

4. Level of damages/losses

One percent of the quantity received at MSD has been agreed as the maximum level of damages and losses within the system as an acceptable level of stock write-offs. This applies from the moment MSD assumes title at National level to the point of delivery at district level, in accordance with prevailing statutes addressing the storage of government property in Tanzania.

Thereafter MSD will provide full compensation to the MOH for unacceptable levels of commodity losses in a timely manner upon presentation of documentary support of the matter by the MOH.

5. Security

MSD will be expected to provide all reasonable security measures at all their premises to prevent losses from internal and external sources.

I. Materials Handling

1. Background

MSD is expected to provide conditions which fulfill the manufacturers' recommendations on all products. Additionally, MSD will be expected to provide minimum standards of storage handling to enable procedures such as stock rotation and batch control to be administered.

2. Batch control

Whilst stored under the jurisdiction of MSD, it is expected that all individual manufacturers' batches will be stored in separate storage locations and stock records will contain full batch details. In the event of a batch recall, the stock cards will be available to assist in the tracing of individual batches. MSD will be expected to provide full cooperation in tracing and isolating any such batches.

3. Stock rotation

In all instances, unless otherwise directed by the MOH, MSD will issue the oldest contraceptives and related medical supplies available (i.e. the First Expiry, First Out principle) from their storage locations. MSD will ensure to distribute commodities to the district level with a minimum shelf life outstanding of 6 months.

4. Quarantine

It is likely that periodically there will be a requirement to "freeze" contraceptive or related medical supplies batches following or whilst awaiting tests from involved parties. In such situations, MSD will be expected to hold such batches against accidental issue on the instructions of the MOH, at any or all of their storage locations.

Following release and clearance of the batches, MSD will identify the contraceptives and related medical supplies as being available for issue either by placing them in an issuing location or removing the identification placing the items on hold.

5. Environmental conditions

MSD will be expected to provide environmental conditions of storage addressing the requirements of the contraceptives and related medical supplies in question, as outlined above. Specifically these will include provision for services to allow minimum operating standards. To include: lighting, temperature, cleanliness, atmospheric conditions (including protection from dust), building standards (including protection from elements), pest/rodent control and protection from water and moisture.

6. Product compatibility

MSD will ensure all reasonable measures will be taken to avoid damage to the commodities by storage with other products which will lead to contamination. Where there is negligence in addressing this requirement on the part of MSD, the MOH will be compensated in full for damaged commodities.

7. Product identification

Whereas contraceptives and related medical supplies generally arrive labeled on the outer carton with product names, batch numbers and expiry dates, it is likely that in the course of transit, prior or post delivery to MSD, that such labels may come adrift. With the assistance in identification from the MOH, where necessary, MSD will affix new labels identifying all the above details on each carton.

Appendix B
Distribution Cost Estimates—1998

Table B-1. Distribution Costs for 1998 under the Proposed MSD Integration

Product	Forecast demand (1998)	Donor	Units per carton	Carton volume (M^3)	Total volume *(W)* (BxE)/D	No of cartons per pallet	No of pallet locations in racked storage (B/D)/G	Adjust factor	Adjusted pallet location in racked storage (H*I)	MSD charge for (m3) in U.S.$	Total distribution cost (J*K)
A	B	C	D	E	F	G	H	I	J	K	L
Microgynon	2,305,143		2,640	0.10	87	15	59	3	177	$133.00	$23,541
Lo-Femenal	1,326,860	USAID	1,200	0.04	44	28	40	3	120	$133.00	$15,960
Microval	517,316	UNFPA	600	0.02	17	50	18	3	54	$133.00	$7,182
Depo-Provera®	1,390,531	DFIDIKFW	100	0.01	139	84	166	3	498	$133.00	$66,234
CUT 380A	14,620	USAID	200	0.04	3	36	2	3	6	$133.00	$798
Conceptrol	267,827	USAID	4,800	0.04	2	36	2	3	6	$133.00	$798
Neo-Sampoon	2,534	UNFPA	3,200	0.02	0	64	1	3	3	$133.00	$399
Condoms	19,478,219	UNFPA	5,760	0.10	338	25	136	3	408	$133.00	$54,264
				TOTAL	**630**		**424**		**1,272**		**$169,176**

Notes: This is the cost for storing and distributing quantities estimated for the 1998 contraceptive forecast. Contraceptive commodities are included in the MSD's storage and distribution charges; however, medical equipment, IEC materials and other miscellaneous supplies are out of this table. Those materials and supplies will also be charged at $133.00 per cubic meter at the adjusted pallet location in racked rate.

1. Adjustment factor calculated for floor space to obtain number of pallet locations stored and distributed. Norplant® has been excluded from the table as UMATI collects directly from the warehouse.
2. The total quantity of condoms include the RHU and NACP needs.

Table B-2. Distribution and Storage Unit Costs for Forecasted Demand 1998 from Central to District Level

Product	Forecast demand (1998)	Units per carton	Carton volume (rn^3)	Total volume (m)	No of cartons per pallet	No of pallet locations in racked storage	Adjusted pallet location in racked storage	MSD charge for (m^3) in U.S.$	Total distribution cost (J*K)	No of cartons required (B/C)	Distribution cost per unit. (based on single carton) (J/K)
A	B	C	D	E	F	G	H	I	J	K	L
Microgynon	2,305,143	2,640	0.10	87	15	59	177	$133.00	$23,541	873	$26.96
Lo-Femenal	1,326,860	1,200	0.04	44	28	40	120	$133.00	$15,960	1106	$14.43
Microval	517,316	600	0.02	17	50	18	54	$133.00	$7,182	862	$8.33
Depo-provera®	1,390,531	100	0.01	139	84	166	498	$133.00	$66,234	13905	$4.76
CUT 380A	14,620	200	0.04	3	36	2	6	$133.00	$798	73	$10.92
Conceptrol	267,827	4,800	0.04	2	36	2	6	$133.00	$798	56	$14.30
Neo-Sampoon	2,534	3,200	0.02	0	64	1	3	$133.00	$399	1	$399.00
Condoms	19,478,219	5,760	0.10	338	25	136	408	$133.00	$54,264	3382	$16.05
			TOTAL	**630**		**424**	**1,272**		**$169,176**		

Notes: Norplant® has been excluded from this table as UMATI distributes directly to the 36 clinics around the country using this implantable. Unit costs will apply to commodities stored and distributed under the integrated system at MSD.

a. Neo-Sampoon unit cost is based on one box moved, therefore is not representative, therefore charges as per 1997 apply ($6.08 per carton).

Appendix C
LMIS Reports and Documents Needed

Table C-1. LMIS Reports and Documents Required under the Proposed Integrated Distribution System

Form/document name	Parties involved	Purpose of document	Information contained
Report and Request (R&R) form	MCH/FPU SDPs to district level	Report monthly consumption	Date of completion Beginning of month stock balance Amount received Amount dispensed to clients Losses or transfers Ending of stock balance Quantity requested
Aggregated SDPs R&R forms	MCH/FPU District to Regional level	Monthly aggregated consumption	Same as above but aggregated by SDPs/districts
Aggregated R&R forms from districts	MCH/FPU Regional to National level	Quarterly aggregated consumption	Same as above but aggregated by districts to obtain a regional report
Delivery note and Proof of Delivery (PoD)	MCH/FPU District to SDP level MCH/FPU District and MSD zonal store NOTE: These two activities will be recorded on one form, though the two documents referred to will be different.	Recording of contraceptive being loaded onto the vehicle and accompanies the goods in transit. Title changes on signature from MSD to the district health management team (DHMT) thus, the delivery note also acts as a proof of delivery.	Date of loading Contraceptive brand name Quantity dispatched/received Signature from dispatching store Signature from receiving store Driver's signature Comments in the event of damage or incomplete order

Form/document name	Parties involved	Purpose of document	Information contained
MSD Delivery note	Between zonal and District stores and between MSD Central and zonal (internal communication) stores	Proof that contraceptive commodities were delivered in good order.	Date of loading Product name Quantity dispatched Signature from dispatching store Signature from receiving store Remarks in the event of damage or incomplete order
Requisition voucher as required	MCH/FPU District/National to MSD Zonal/National Level (with copy sent to the Regional MCH Coordinator)	To establish quantities to deliver to district level.	Date of request District name Product name Quantity requested Remarks Delivery date (as agreed)
Unfulfilled order report compiled from zones	MSD National to MCH/FPU National Level	Reasons for order unfulfillment to rectify situation.	Date of order District name Product name Shortfall Reasons
Proof of Delivery (PoD)	MCH/FPU at Central level requires proof of delivery to Zonal-District level by MSD	Report that contraceptive commodities has been a received in good order (for invoicing purposes).	Date of delivery Product name Quantity received Signature from receiving store Driver's signature Remarks in the event of damage or losses since or incomplete order

Form/document name	Parties involved	Purpose of document	Information contained
Invoices	Between MSD and MCH/FPU at Central Level	The invoices are based on proof of delivery to district level.	Date of Transaction Product Volume delivered (m3) Distribution cost (calculated by volume) Remarks
Payment	UNFPA/USAID deposit funds in FPU's IMPREST account. and MSD withdraws money monthly after approval from FPU	To pay MSD for distribution services.	Date Volume/price delivered that month Amount to be paid Signatures

Appendix D
Roles and Responsibilities of RCHS Logistics Personnel

A. Management Information Systems Officer

a) Carrying out continuous review, assessment and evaluation of the functioning of the family planning (FP) logistics system at all levels.

b) Collaboration with the Ministry of Health, Health Information System, to monitor and analyze FP data to provide feedback to the regions, districts and service delivery points.

c) Liaison with donor agencies and the National Family Planning Program (NFPP) collaborating agencies to ensure availability and adequacy of FP supplies throughout the country.

d) Liaison with FPLM and local training institutions with a view to coordinate FPLM project activities, FP logistics technical assistance inputs.

e) Participating in FP logistics training activities from time to time as may be necessary and follow-up FP logistics training activities and participants.

f) Designing and ensuring implementation of a properly functioning logistics management information system (LMIS).

g) Coordinating the distribution, collection, and analysis of contraceptive status forms to and from regions and districts.

h) Coordinating collection, compilation and aggregating supplies and Family Planning Unit (FPU) service delivery data.

i) Liaison with NFPP field personnel to establish their data and operational needs.

j) Designing and operating a functioning reminder system to ensure that NFPP activities are on schedule per approved workplans.

k) Effecting and coordinating the evaluation of FP logistics training activities.

l) Performing FP logistics management and management information system (MIS) related tasks as assigned.

B. MIS Assistant

a) Obtaining from relevant sources and enter the essential NFPP data into the computer.

b) Classifying and format the NFPP data entered into the computer for analysis.

c) Retrieving specific data from the computer needed by the various NFPP/FPU program personnel for their use.

d) Assisting the NFPP/FPU program personnel with analysis data and information, as required.

e) Ensuring that NFPP data entered into the computer is updated and modified on a regular basis.

f) Alerting NFPP/FPU personnel of any errors in FP data and information provided by field personnel.

g) Checking NFPP data for accuracy before classifying and entering into the computer.

h) Regularly supplying relevant data required by NFPP/FPU program personnel for decision making and for report or brief writing.

C. Logistics Officer

a) Supervising the operations of the FP of logistics sub-unit and taking charge of contraceptives' logistical support management.

b) Coordinating the collection of contraceptive data/information, forecasting national contraceptives and preparing the necessary ordering documentation.

c) Coordinating the scheduling of shipments and deliveries to the central level.

d) Coordinating transport for contraceptive distribution and delivery in consultations with the office supervisor.

e) Developing strategies and plans for the improvement in the ordering, warehousing, and distribution of contraceptives.

f) Effectively planning NFPP commodity requirements.

g) Recording, analyzing, and reporting on all movements in the non-expendable assets of the program.

h) Preparing cost elements for each commodity received and assist the program manager in cost-saving for the program.

i) Conducting periodic assessments (including physical inventories) of the functioning of the logistics system at all levels.

j) Ensuring coordination with the integrated PHC Transport and Logistics Committee, contraceptive donors, NGOs and other cooperating agencies in the field of FP logistics.

k) Preparing requests for the purchase of program and office equipment/supplies and follow-up deliveries with the government and various donors of the same.

1) Maintaining and updating inventory records of all expendable and non-expendable program and office equipment and supplies, for custody and security of the same.

m) Coordinating FP logistics management training and evaluation in the country.

D. Supply Officer

Will work under the direction and supervision of the Deputy Program Manager in execution of the following:

a) General management of the Family Planning Commodities Central Warehouse.

b) Receiving and reviewing shipping.

c) Receiving and issuing FP supplies and equipment.

d) Responsible for safe custody and security of commodities, equipment and vehicle.

e) Maintaining accurate and update stock records.

f) Periodically reviewing stock levels and prepare stock report.

g) Carrying out periodic physical inventory.

h) Any other duties and responsibilities, as assigned.

E. Research and Evaluation Officer

a) Coordinating the development of a research agenda for the program.

b) Maintaining a working relationship with research institutions, national and international.

c) Reviewing and recommending research proposals for implementing the research agenda.

d) Initiating operational research in response to information needs of the program.

e) Identify a multidisciplinary research team to provide technical support to the program.

f) Acting as custodian of program data bank.

g) In collaboration with the MIS officer, periodically reporting to the program management on the performance of the program in the regions and districts.

h) Based on sound scientific information, advising the management on how to improve the program.

i) Writing research reports for the program.

j) Any other duties and responsibilities, as assigned by the program manager.

F. Finance and Accounting Officer

Reports the Program Manager

1. Objectives

a) To provide accounting, financial, and logistics information to enable the program manager to monitor, control, and report on project management and implementation.

b) To provide management information to the various managers of the project and secure the assets and commodities of the project.

c) To assist the project manager to report to the government and donor agencies on all matters concerning the project.

2. Duties

a) To assist the program manager in the preparation of annual budgets and commodity requirements for submission to the Ministry of Health and donor agencies prior to the start of each financial year.

b) To prepare quarterly review and expenditure reports. This report to be submitted by the 10th of the month following the quarter being reported on.

c) To prepare monthly note book summaries and revenue and expenditure reports by the 10th of the month following the month being reported on.

d) To prepare reimbursement schedules for donor funded expenditures.

e) To record, analyze, and report on all program expenditure and movement in the non-expendable assets of the program.

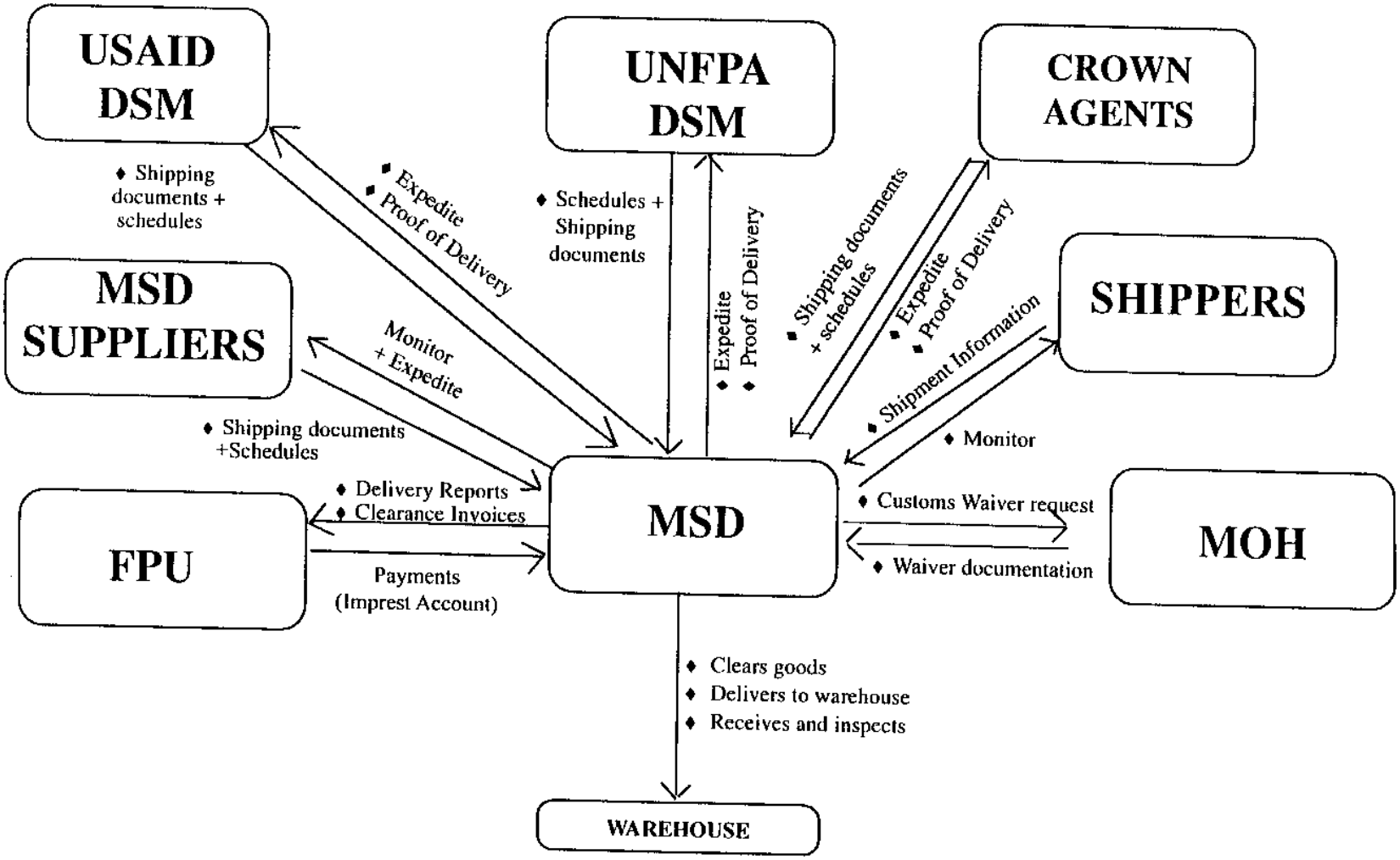
f) To record and report on quarterly commodity receipts in quantities and value.

g) To prepare cost elements for each commodity received and assist the program manager in cost savings for the program.

h) To liaise with banks and donor agencies to prepare bank reconciliation and monthly cash requirements.

i) To do any other duties as may be assigned by the program manager.

Appendix E
Proposed Monitoring and Customs Clearance



Appendix F
Transition Plan

Table F-1. Integration of Contraceptives into the MSD Distribution System

Activity	Begin	End	Person(s) Responsible	Person(s) Involved	Comments
Project Management					
Establish and maintain clear communication channels between FPU and MSD for planning, reporting and coordination.	I Jan	Ongoing	Dir. General, MSD Prog. Manager, FPU	Dep Prog. Manager, FPU Logistics Officer, FPU MIS Officer, FPU RM&Eval Officer, FPU Director Distribution, MSD C. Dir Distribution, MSD Director Procurement, MSD C. Dir Procurement, MSD Director Finance, MSD C. Director Finance, MSD	Communication channels have already been established, but need to be formalized and strengthened.
Hold regular FPU/MSD meetings during the transition period.	I Jan	31 Mar	Dir. General, MSD Prog. Manager, FPU	All relevant FPU and MSD officers and staff	FPU Logistics Officer & MSD Dist. Director should meet at least once weekly.
Establish procedures for MOH feedback on the MoU, subsequent amendments and clearance.	15 Nov	15 Feb	Prog. Manager, FPU	MOH USAID UNFPA	Program manager to approach Director of PS, CMO as appropriate for feedback. Subsequent amendments.

Activity	Begin	End	Person(s) Responsible	Person(s) Involved	Comments
Staffing					
Decision on redeployment of current FPU staff following implementation of integrated system.	I Jan	28 Feb	Prog. Manager, FPU	MOH USAID UNFPA	FPU lorry drivers and Mikocheni supply officer are affected.
1.2 Agree on FPU staffing and job responsibilities under the integrated distribution system.	I Jan	28 Feb	Prog. Manager, FPU	MOH Logistics Officer, FPU MIS Officer, FPU	Staffing issues need to be decided early to allow time for proper training & orientation.
Monitoring & Evaluation					
Design the integration evaluation study; collect baseline data.	late Jan	28 Feb	RM&E Officer, FPU	Logistics Officer, FPU MIS Officer, FPU Dir. Distribution, MSD	Baseline data to be collected prior to integration.
Develop and field test M&E data collection instruments: ▪ Warehouse Inspection Checklist ▪ Stock Level Monitoring Form ▪ Loss/Wastage Tracking & Reporting Form ▪ Distribution Costs Tracking & Reporting ▪ Customer Satisfaction Questionnaire ▪ Various evaluation study instruments	I Jan	28 Feb	RM&E Officer, FPU Logistics Officer, FPU	MIS Officer, FPU Dir. Distribution, MSD	Instruments must be developed in time to allow for printing and orientation.
Orient/train FPU staff in their M&E role under an integrated distribution system.	I Jan	31 Mar	Logistics Officer, FPU	FPU staff at central, regional and district levels	Major activity because it involves numerous FPU staff at multiple levels.

Activity	Begin	End	Person(s) Responsible	Person(s) Involved	Comments
Make an M&E plan for the first 6 month period of integration.	I Feb	15 Mar	Logistics Officer, FPU	Prog. Manager, FPU RM&E Officer, FPU MIS Officer, FPU Dir. Distribution, MSD	The M&E plan will include a schedule of inspection visits and other monitoring.
Finance					
Agreement on donor funding schedule for paying MSD.	I Jan	15 Mar	Prog. Manager, FPU	USAID UNFPA Dir. General, MSD Finance Officer, FPU Dir. Finance, MSD Dir. Distribution, MSD	A quarter of the estimated total annual distribution costs to be deposited in FPU imprest account; monthly payments to MSD upon submission of invoices.
Establish imprest account; decide on signatories, bookkeeping, and reporting procedures.	I Jan	28 Feb	Prog. Manager, FPU	USAID UNFPA Dir. General, MSD Finance Officer, FPU Dir. Finance, MSD	Donor agencies should make first deposits by I March if integration is to begin I Apr.
Agree pricing mechanism and commercial terms.	I Jan	28 Feb	Prog. Manager, FPU Dir. General, MSD	USAID UNFPA Finance Director, MSD Dir/CDir Distribution, MSD	To be incorporated into schedule I of MoU.
Materials Handling					
Agree minimum shelf life at zonal levels.	I Jan	I Feb	Prog. Manager, FPU Dir. General, MSD		

Activity	Begin	End	Person(s) Responsible	Person(s) Involved	Comments
LMIS					
Revise and field test the following LMIS forms: ▪ Requisition vouches ▪ Unfulfilled order report ▪ Delivery note/proof of delivery	I Jan	28 Feb	MIS officer, FPU	MIS, RM&E and Logistics Officers, FPU Program Manager, FPU Deputy Prog Manager FPU	Forms should be developed and field tested in time to allow for printing and orientation.
Identify documentation that will change under the integrated system.	15 Nov	30 Jan	MIS officer, FPU Logistics officer, FPU	MIS, RM&E and Logistics Officers, FPU Program Manager, FPU Deputy Program Manager	Documentation that requires change for the new *modus operandi* needs to be identified.
Identify new documentation required under the new integrated system: ▪ Transaction records ▪ Delivery note/proof of delivery ▪ Invoice procedures from District level	15 Nov	30 Jan	MIS officer, FPU Logistics Officer, FPU	MIS, RM&E and Logistics Officers, FPU Program Manager, FPU Deputy Program Manager	The design of the forms will be a major undertaking that involves training and support to the users.
Identify new reporting structure and frequency of reporting.	I Dec	30 Jan	Program Manager, FPU	All levels of the Family Planning Unit (Central, Regional, District and SDP level) plus zonal level	The reporting structure should be identified and clarified to all parties. Orientation to those concerned is required.
Establish interim ordering mechanism at SDP level.	I Dec	I Feb	Program Manager, FPU	Logistics Officer, FPU MIS, RM&E Officers USAID UNFPA DFID Technical Assistance	Orientation session at District and Regional levels.

Activity	Begin	End	Person(s) Responsible	Person(s) Involved	Comments
Procurement and Supply					
Identify and agree upon role MSD to play in preparing annual forecast.	15 Jan	31 May	Logistics Officer FPU, Dir. Distribution MSD Cdir.Distribution MSD USAID UNFPA DFID	Program Manager FPU Director MSD MIS Officer FPU	
Provide funds for technical assistance in CPT preparation and training.	15 Jan	28 Feb	HPN Officer AID	Program Manager FPU Logistics Officer FPU Technical Assistance	Two-week activity within designated period.
Agree upon schedule for phasing in MOH funding for contraceptive purchases.	I Jan	30 Mar	Prog Manager FPU USAID UNFPA DFID	MOH	
Confirm sufficient storage for projected annual contraceptive commodities.	Annual		Dir. Distribution MSD, C.Dir. Distribution MSD	Contracts Manager FPU Logistics Officer FPU	Completed within one month of receipt of annual forecast from FPU.
Designate MSD focal point for receipt and monitoring of donor shipping information.	I Jan	I Feb	Dir.Distribution MSD, C.Dir. Distribution MSD	Logistics Officer FPU	For shipping information forwarded from FPU.
Designate MSD focal point for scheduling delivery and receiving goods at national warehouse.	I Jan	I Feb	Dir. Distribution MSD, C.Dir. Distribution MSD	Logistics Officer FPU Warehouse Manager MSD	
Identify and agree upon procedures and documents for receiving and inspecting commodities at national store.	I Jan	I Feb	Logistics Officer FPU, Dir. Distribution MSD, C. Dir. Distribution MSD	Warehouse Manager MSD	
Identify and agree upon procedures and documents for notifying donors of problems with received commodities.	I Jan	I Feb	Logistics Officer FPU, Dir/CDir. Distribution MSD	USAID UNFPA Crown Agents (DFID/KfW)	Notify donors of short shipments, damaged goods, etc.

Activity	Begin	End	Person(s) Responsible	Person(s) Involved	Comments
Consider during Phase I MSD's role in customs clearance including charges and consignatary arrangements.	I Mar	I Jun	Dir/CDir Procurement MSD Prog Manager PU	USAID UNFPA Crown Agents (DFID/KfW)	During Phase 1, consider MSD to clear contraceptives on behalf of FPU.
Storage					
Resolve funding and management issues for Mikocheni warehouse.	I Jan	I Feb	H PN Officer USAID, Program Manager FPU	Dir/C.Dir Distribution MSD	Two storage units. MSD's storage facilities at DSM ready by 4th quarter 98.
Advise Zanzibar of new collection arrangements.	I Jan	31 Mar	Logistics Officer FPU	Dir/C.Dir Distribution MSD	
Agree on full inventory date prior to transition.	I Jan	31 Mar	Logistics Officer FPU, Dir/C.Dir Distribution MSD	Logistics Officer FPU MIS Officer FPU	
Identify and agree on procedures for moving contraceptive stock from the regions to the zones and/or districts or to DSM for initial stock check.	I Jan	28 Feb	Logistics Officer FPU, Dir/C.Dir Distribution MSD	Logistics Officer FPU MIS Officer FPU	
Transport					
Dispose of FPU vehicles; no longer needed for distribution of contraceptives.	I Jan	31 Mar	Logistics Officer, FPU	Prog. Manager, FPU Dir/CDir. General, MSD Dir/C.Dir Distribution MSD MOH UNFPA & USAID	4 donated 10-ton vehicles are to be sold or reassigned.
Make annual delivery schedules from MSD zonal stores to districts.	I Jan	28 Feb	Dir/C. Distribution MSD	Logistics Officer, FPU	Delivery required by 31 Jan to allow time for orientation of district staff.
Identify acceptable level of pipeline loss.	I Jan	I Feb	Logistics Officer FPU, Dir/C/Dir Distribution MSD	Logistics Officer FPU Dir/C. Dir Finance MSD	

Appendix G
Mufindi District

A. Background

Mufindi district is one of six districts under the Iringa region on the Tanzam highway. It has a total area of 7,122 sq km and comprises two hospitals, three health centers, and 30 clinics and dispensaries. In addition, there are 133 community-based distribution volunteers trained and active. The district hospital is situated in Mafinga.

Extensive interviews were conducted with the District Medical Officer (DMO), the District MCH Coordinator (DMCH), the District AIDS Coordinator (DACC), and the District Cold Chain Officer (DCCO).

As a result of health sector reform, the distribution and supervisory activities are conducted separately. Members of the District Health Management Team (DHMT), together with co-opted members, visit all facilities on a monthly basis for supervision activities, and the driver and DCCO for distribution ones.

B. Supervision Activities

There is a supervision schedule prepared by the Transport officer without consultation from the DMO or the DHMT and co-opted members. The supervisory team members include—

*	The District Health Management Team
DMO	District Medical Officer
DMCH	District Maternal and Child Health Coordinator'
DCCO	District Cold Chain Officer[1]
DHO	District Health Officer
DNO	District Nursing Officer
*	The co-opted Members
DEDPC	District Essential Drugs Program Coordinator
DACC	District AIDS Coordinator[2]
DTLC	District TB and Leprosy Coordinator
DVHWCO	District Village Health Workers Coordinator
DcontEd	District Continuous Education
DOPTH	District Ophthalmic
DLAB	District Laboratory Technician

Notes:
1. Have been trained to fill in the Report and Request form (R&R) on the job training by the DIVICH coordinator. Other members of the supervision team have not being trained.
2. Received basic logistics training.

The DMCH coordinator should visit all facilities on a quarterly basis, thus requiring to visit a number of them every month. In addition, at least one member of the DHMT should always be part of the team. However, upon inspection of the May supervisory schedule, the DMCH coordinator was involved in

supervisory activities only once (in one of the 12 routes). Moreover, in five routes there were no DHMT members as part of the team.

Those interviewed mentioned supervision lasts three hours at each facility, which can be difficult to achieve when visiting more than two SDPs in one day. The district has two twin-cab Hilux vehicles for supervision; however, one of them has been in the garage for over five months due to lack of financial resources to pay for maintenance, although no shortage of funds was reported for supervision activities.

C. Distribution Activities

Supplies reach all facilities on a monthly basis using one single cab Hilux. The transport officer puts together an annual distribution schedule. In many occasions, the schedule is not followed due to heavy rain and thus, road inaccessibility. If the distribution vehicle is delayed and reaches dispensaries after office hours there is no one available to receive the delivery and therefore it is required to reschedule the delivery. Most of the facilities visited had the annual delivery schedule posted in the wall.

All R&R forms kept at district level were examined. The DMO explained past problems with availability of products existed prior to 1997, but for about a year, the district had not experienced any stockouts. Upon inspection of the forms a different picture emerged. Table G-1 shows the number of facilities which were stocked out in January 98.

Under the new health sector reform, there is no budget for anyone except for the driver to deliver commodities, however, at Mufindi district, the DCCO had volunteered to accompany the driver with a two fold purpose: (1) to ensure all commodities are handled according to the manufacturers' recommendations and distribution practices; and (2) to assist those in-charges who are unable to fill in the R&R forms to complete it, collect it and deliver it for compilation by the DMCH coordinator. When the DCCO is unable to accompany the driver, the DMCH or other assistant travel.

Table G-1. Number of SDPs stocked out in January 1998 in Mufindi District

Commodity name	SDPs stocked out January 1998
Microgynon	2
Lo-Femenal	2
Depo-Provera®	4
Condoms	5

According to the DCCO, each delivery takes between 10 to 20 minutes, making it almost impossible to be thorough with all commodities and programs. During visits to those five SDPs it was found—

1. There is lack of knowledge from the DCCO who is relatively new, and had only being trained in logistics from the DMCH, therefore SDPs get misinformed as to the practices they should work with (i.e., conduction of monthly physical inventories, max/min levels, etc.).

2. The DCCO is unaware of maximum or minimum stock levels and, as a consequence, SDPs order for one month of supply (although five facilities were visited, this seemed to be a district-wide issue).

3. This results in stockouts and acute shortages. The small amounts received are used to treat a small number of clients. Therefore, when dispensed-to-user data is reported, it shows the number of clients served based on the amount of product available.

4. The delivery vehicle is not loaded of contraceptives according to the needs of those facilities (using the R&R form), rather with whatever the vehicle can carry or whatever amount the DMCH provides for distribution.

5. In any case, the amounts loaded do not represent even the monthly need of those facilities. The DMCH coordinator said she knew of keeping a maximum stock level of three months at SDP level but felt she was providing them with sufficient supply.

D. Service Delivery Points

1. Nyololo dispensary

The dispensary serves five villages and receives monthly visits for delivery and supervision. If the DCCO has time, he fills in the R&R form since the Nurse Auxiliary has had only little on the job training, otherwise she is left to her own devices. If the DMCH coordinator supervises, she will provide on the job training to complete the report, otherwise, there will be no report. The delivery matrix was posted on the wall, therefore deliveries were always waited for.

Nyololo is the last facility of the delivery route, which means the amount delivered is never the quantity ordered, and the quantity ordered is only a fraction of the quantity required. Upon examination of the R&R forms, it was found, the DCCO delivers whatever is left in the vehicle, resulting in an alarming situation of acute shortages and stockouts. Table G-2 shows the supply status of the dispensary for 1998.

Table G-2. Nyololo Supply Status for 1998

Product	January	February	March	April	May* l (as of 13 May)
Microgynon	stockout	stockout	stockout	stockout	stockout
Lo-Femenal			stockout	stockout	stockout
Depo-Provera®		stockout	stockout		16
Condoms		stockout			144

* May delivery was received on 5 May 1998.

As per the delivery schedule, quantities ordered in one month should be replenished in the following month, in other words, what was requested in January should have been supplied in February and so on. Continuing with this methodology, and to illustrate the desperate situation in which the dispensaries in Mufindi district are, table G-3 shows the order fulfillment according to the R&R forms.

Keeping in mind, the stock requested covers only one month of demand, in February and April there was no Microgynon delivered despite having ordered 60 cycles. Only in March they received what it was ordered and in May marginally more. Lo-Femenal follows the same erratic patterns, March was supplied to the total request, April had a delivery of only half the order, which in other words, supplies satisfy a two weeks demand, and in May they received none at all.

Only 20% of the ordered Depo-Provera® was delivered in February, however, the 25 vials constantly requested thereafter had been supplied. Condoms seem to be more regularly supplied being provided in February with more than twice the amount requested.

Table G-3. Nyololo Dispensary Order Fulfillment (from R&R forms)

	January		February		March		April	
Product	**Request**	**Received**	**Request**	**Received**	**Request**	**Received**	**Request**	**Received**
Microgyn	60	30	60	0	60	60	50	0
Lofem	0	50	50	0	50	50	50	25
Depo	25	15	25	5	25	25	25	25
Condom	144	0	0	400	200	200	140	

Clients who are unable to obtain contraceptives from Nyololo, are sent to the nearest dispensary in Maduma which is a 12 km walk.

2. Maduma Dispensary

Maduma has a population of 3,000 people and serves 600 women in reproductive age. Unlike Nyololo, the MCH Aide is able to fill the R&R form in and was trained by the DMCH coordinator during her supervisory visits. The DCCO checks the form before supplying the contraceptives. The delivery schedule was prominently on the wall. Clients coming from other dispensaries are usually able to obtain Microgynon but not Lo-Femenal as it is in short supply. Table G-4 shows the supply status for 1998.

Table G-4. Maduma Dispensary Supply Status for 1998

Product	January	February	March	April	May (as of 13 May)
Microgynon	stockout		stockout		37
Lo-Femenal	stockout				7
Depo-Provera®	stockout				13
Condoms					248

Unlike Nyololo, aside February when they did not receive commodities, they always get the amounts they request albeit too small quantities as it is shown in table G-5.

Table G-5. Maduma Dispensary Order Fulfillment (from R&R forms)

	January		I February		I March		I April	
Product	**Request**	**Received**	**Request**	**Received**	**Request**	**Received**	**Request**	**Received**
Microgyn	30	30	30	0	30	30	30	30
Lofem	0	20	0	0	0	-0	0	0
Depo	0	10	10	0	0	10	10	0
Condom	0	0	0	0	0	0	0	0

3. Ifwagi Health Center

The health center has 12 members of staff, serves 12 villages and a population of approximately 20,000 people. Ifwagi is situated approximately 30 kms from Mafinga District Hospital. They receive contraceptives monthly and a supervisory visit each quarter. The midwife has been trained by the

DIVICH coordinator and is able to fill in the R&R form by herself. The DCCO checks and collects the form when the delivery takes place. If the supplied amount is less than their monthly requirement, the midwife borrows a bicycle from the CBD supervisor and cycles to Mafinga for emergency supplies. Table G-6 shows their supply status to date.

Table G-6. Ifwagi Health Center Supply Status for 1998

Product	January	February	March	April	May (as of 14 May)
Microgynon			stockout	stockout	282
Lo-Femenal	stockout				171
Depo-Provera®					31
Condoms	stockout				288

The shortfall is addressed by adjusting their dispensing protocols thus providing one cycle of orals and less condom quantity at a time. If they ran out of condoms they'd borrow' from the AIDS prevention ones, which seemed to be adequately supplied. Table G-7 presents the amounts requested and received monthly (according to the R&R forms).

Table G-7. Ifwagi Health Center Order Fulfillment (from R&R Forms)

	January		February		March		April	
Product	Request	Received	Request	Received	Request	Received	Request	Received
Microgyn	602	210	840	0	375	150	360	90
Lofem	384	200	330	600	390	100	346	0
Depo	22	50	65	0	79	25	28	25
Condom	1281	700	517	1300	1140	200	1215	

Unlike the dispensaries visited, Ifwagi Health Center provides additional services, such as IUD insertions and community based distribution. The 40 CBD volunteers supply Microgynon, Lo-Femenal, foaming tablets, and condoms with monthly orders up to a maximum number of 30 cycles of orals and 100 condoms.

4. Mufindi Tea Company (MTC) Dispensary

Mufindi Tea Company Dispensary has a total population of 2,448 and serves two villages. Deliveries are received monthly and the distribution schedule was posted on the wall. The nurse midwife was able to fill in the R&R form unaided and was trained by the DIVICH coordinator in her supervisory visits. She was aware of the three-month maximum stock level but did not ask for that amount since the quantities received are largely dependant on the quantities available in the delivery vehicle.

MTC are privileged to have the use of a vehicle that enables them to collect contraceptive supplies from Mafinga if they are running short. Table G-8 shows their supply status to date which reflects the dispensary's ability to collect commodities as required. During the consultant's visit, 54 vials of Depo-Provera® were provided to avoid further shortages.

Table G-8. MTC Dispensary Supply Status for 1998

Product	January	February	March	April	May I (as of 14 May)
Microgynon					75
Lo-Femenal					91
Depo-Provera®				stockout	9
Condoms					

Quantities received at MTC are also a fraction of their monthly requirements (see table G-9). In the case of Microgynon, two consecutive months were supplied with only two-thirds of their monthly requirement, while in April with only a quarter. Lo-Femenal was well supplied in February and March, however, in April nothing was received. Depo-Provera® follows a similar pattern, February was not supplied at all, in March only 75% of the requested amount was delivered and in April half the amount reported which lead to a stock out. The supply situation of condoms was surprisingly adequate.

Table G-9. MTC Dispensary Order Fulfillment (from R&R Forms)

	January		February		March		April	
Product	**Request**	**Received**	**Request**	**Received**	**Request**	**Received**	**Request**	**Received**
Microgyn	90	30	90	60	120	60	90	30
Lofem	60	50	50	100	100	50	100	0
Depo	50	0	30	0	50	25	25	25
Condom	300	200	0	400	0	-400	100	400

5. Luhunga dispensary

Luhunga dispensary, although remote, seemed to be accessible during the rainy season and, therefore, receives monthly deliveries. The delivery schedule was posted on the wall. The R&R form is filled in by one of the nurse auxiliary and is collected when the delivery takes place. The DMCH has trained the nurse auxiliary during the supervisory visits. However, although they find it useful, supervision does not seem to be constant. They were supervised three times last year and only once this year.

The in-charge claims their requests are usually replenished on a monthly basis and have had no stockout problems for over a year. He also mentioned they order for three months as they are aware of their maximum stock level requirements. Upon inspection of their records, a different picture emerged. Table G-10 shows the supply status to date showing that during April they were stocked out of most commodities.

Table G-10. Luhunga Dispensary Supply Status for 1998

Product	January	February	March	April	May* I (as of 14 May)
Microgynon				stockout	71
Lo-Femenal					188
Depo-Provera®				stockout	28
Condoms	stockout			stockout	stockout

* May delivery was received on 7 May.

Unfortunately, as Luhunga constantly orders the same quantities since June 1997 (see table G-11), irrespective of the number of clients attended, the amounts ordered even when the May delivery took place one week prior to the district study, they had no condoms in stock. The reason given for the constant order quantity was pressure from the district to order monthly.

Nevertheless, even if these order quantities covered a month of supply, the quantities received do not cover those requirements like in all cases. There was no Microgynon delivered for two consecutive months (February and March), whereas Lo-Femenal and Depo-Provera® were not received in March or April. Less than half the condoms requested were supplied in February, in March and April there non were received. In fact there was no delivery on March.

Table G-11. Luhunga Dispensary Order Fulfillment (from R&R Forms)

	January		February		March		April	
Product	**Request**	**Received**	**Request**	**Received**	**Request**	**Received**	**Request**	**Received**
Microgyn	117	30	117	0	117	0	117	120
Lofem	93	0	93	100	93	0	93	0
Depo	25	0	25	0	25	0	25	25
Condom	225	200	225	100	225	0	225	0

To ascertain the order quantity for April, the consumption figures for the first quarter of the year were examined and the quantities that should have been requested for the month of April are—

Microgynon	197
Lo-Femenal	181
Depo-Provera®	33
Condoms	380

The fixed order quantities for the month of April are actually around 60% below quarterly requirements.

E. Recommendations

A number of recommendations are provided in the light of Mufindi district operational procedures. However, most recommendations apply to all districts for the proposed integrated system. Some recommendations address short-term issues, although more comprehensive, long-term recommendations are also included.

1. Mufindi District

1.1. Supervision

Coordination and communication is required for the preparation of the supervisory schedule between the DMO, the DHMT and the Transport Officer to ensure adequate levels of supervision are provided throughout, particularly concerning the involvement of the DMCH coordinator.

Coordination and communication is also required at the regional level to ensure all members of the regional HMT are conversant with family planning supervision and are able to perform this duties on behalf of the RMCH coordinator.

1.2. Delivery

In the long term it is required to strengthen the district level by logistics training to all members of the DHMT (see Appendix F). This will allow—

1. Less reliance on a single member of the DHMT.

2. Good logistics practices, such as physical inventories, minimum and maximum stock levels, and ordering to their maximum rather than below emergency order point.

3. Increase the level of family planning service provided.

In the short term it is recommended that both, the Region and District MCH coordinators work together with the DMO to ensure three months of supply are calculated from current figures and ensure the vehicle is loaded with quantities required.

1.3. Reporting system

Under the new integrated system the Zonal Medical Stores Department will distribute directly to the district level, thus, skipping the region step. Recommendations are listed below:

1. For the region to carry on collecting and compiling reports for the districts and forward this information to the Zone with copies of the R&R forms. This option may reassure the RMCH coordinators, however, it is considered time consuming and still a vertical approach.

2. The most preferred option, would be for the districts to report directly to the zonal store, thus, the MSD drivers collecting the R&R forms upon delivery. The Regional MCH coordinator should assist those districts which report late or not at all to determine quantities required.

3. A copy of all R&R forms received at the ZMSD should be made available to all RMCH coordinators to keep track of their districts' supply status and service statistics.

4. A bimonthly report and delivery (district-zone-district) system should be implemented whereby, the district increases the maximum stock level to four months and keeps the SDP level at three months. This will facilitate the zone district delivery and the district-zone reporting.

1.4. Role of the Regional Mother and Child Health Coordinator (RMCH)

- To work closely with the DMCH coordinator on supervisory visits and in more ad hoc basis

- To liaise regularly with the Zonal Medical Stores Department (ZMSD) manager.
- To obtain copies of district Report and Request forms from ZMSD to continue tracking district order quantities in relation to service provision.
- Act as the link between the district and the zone in case of lack of communication and/or misinformation.
- In case of non-reporting, the RMCH should make allocation decisions and communicate them to the ZMSD.
- Close communication with the DMO and all members of the DHMT to ensue adequate family planning supervision provision for all districts.

1.5. Role of the District Mother and Child Health Coordinator (DMCH)

Timely delivery of the Report and Request forms to the zone by ensuring that all SDPs under the district's jurisdiction:

- Report and request in a timely fashion the order quantity reaches the maximum stock level do not experience shortfalls or stockouts.
- Close communication with the RMCH to solve problems arising from the new *modus operandi.*
- Ensure the delivery vehicle is loaded with contraceptive quantities as per R&R forms.
- Ensure the delivery vehicle delivers contraceptive commodities in accordance with SDP requirements.
- Close communication with the DMO and all members of the DHMT to ensue adequate family planning supervision provision for all SDPs.

F. Proposed Next Steps

To ensure the transition to a (partial) integrated system occurs with minimum disruptions and problems as soon as it is practicable, it is suggested that the Reproductive and Child Health Unit (RCHU) of the Ministry of Health communicate to all districts concerned in the Iringa, Mbeya, Ruvuma and Rukwa regions the new *modus operandi.* For that purpose, the regional stock has to be transferred to either the district or the zone.

It was suggested that for the next quarterly delivery (taking place in July), the districts place an order to the region for four months of stock which will enable the region to deplete most of their stock. However, for the contraceptive still remaining at the region, it should be transferred to the zone by the Ministry of Health. This will avoid overstocks at district level which result in pilferage and damage to contraceptives.

After the July delivery is over, districts will order through the zonal stores as specified in previous sections, therefore for the September delivery, orders should be at the zone by mid-August to start the partial distribution on MSD's distribution schedule. If the MOH is unable to meet this deadline, MSD is happy to accommodate any reasonable request to suit the Ministry to start distribution a month later.

Other issues are still unresolved which require immediate attention particularly, the approval and consequent signature of the Memorandum of Understanding and the setup for the payment mechanism for

the Medical Stores Department distribution services. Other unresolved issues pertaining to country-wide integration should be addressed in due course.

Throughout the partial integration it is expected that the Reproductive and Child Health Unit staff, be available to any issues emanating from the new structure together with the regions and the Medical Stores.

Appendix H
Transfer of Selected Activities of EPI into MSD Regular Operations—Phase II

A logistics system for the flow of EPI-related supplies between the Zonal Medical Store and the District

Final Report

(Dar-Es-Salaam—November 1996)

Nicolas de Metz
Logistics Advisor
Consultant appointed by
KAMPSAX WTERNATIONAL A/S
To The Medical Stores Department
The United Republic of Tanzania

Only a segment of this report has been provided. If you would like a complete copy of the report, contact Nicolas de Metz.

A. Background

The Health Sector Reform Action Plan 1996/1999 calls for the integration of the services of vertical programmes. A number of logistical functions are planned to be taken over by Medical Stores Department (MSD) with the immediate objective of increasing efficiency while containing and/or decreasing costs.

Following the signature of a *Memorandum of Understanding* between EPI and MSD on July 1996, EPI transferred its **central** procurement and distribution function for vaccines and other related supplies to MSD. MSD took over key infrastructure and staff

In the first phase, the distribution finiction has been transferred to MSD, up to the level or the Regional Vaccines Store (RVS). In this phase, EPI has been responsible for the management of the RVS and for the distribution to the district level.

In the second phase due to start during the last quarter of year 1996, RVS will be closed gradually and their function transferred to MSD Zonal Medical Stores (ZMS). In order to facilitate the transfer of the logistical activities of EPT to MSD, a consultant has been asked to prepare a detailed implementation plan for this second phase.

1. This plan should (term of reference):

- Define the roles and responsibilities of EPI and MSD in the revised system.
- Include a detailed inventory and evaluation of the fixed assets of each RVS and their appropriation in the new system.
- Identify the requirement for adaptation of buildings and for equipment necessary for MSD to carry out efficiently the new storage and distribution functions.
- Identify the needs at ZMS for additional staff requirement.
- Describe the needs for training in the field of cold chain for all staff operating in this area and prepare a training plan with trainers, a schedule, methodology and indicators.
- Provide a detailed schedule for the actual transfer of functions per RVS and per ZMS.
- Provide a briefing and information proposal for staff involved in EPT and MSD operations and at the district level.
- Provide a distribution plan from ZMS to the districts with detailed procedures.
- Include a budget proposal.
- Provide forms for stocktaking, vaccines ordering, reports and authorizations, etc.

B. Methodology and calendar of the consultancy

The following references are the basis for the consultancy

1. Health Sector Reform Action Plait 1996/1999

Memorandum of Understanding for the transfer of selected activities of EPI into MSD operations (July 1996)

Terms of reference

September was dedicated to information and data collection.

1.1. At the arrival of the consultant, a significant effort was in process for the organization and the operation of the National Immunization Days (NID's) by the MOH and EPI programme. During this period (September) the consultant has concentrated in collecting information available at MSD and DANIDA (September 1996) through—

- *Interview of MSD staffs*
- *Interview of DANIDA advisorfor EPI*
- *Consulting documents (see references in annex)*

1.2. Visit to Iringa: ZMS, RVS, DVS (September 1996)

1.3. Contact and meetings with MOH: After the NID's, MOH has been contacted and informed.

One Meeting with Assistant Chief Medical OfficerlPreventive services and I-lead of PHC Secretariat
One Meeting with EPI programme manager

At the end of September 1996 a draft proposal was prepared.

The draft proposal for the implementation of the transfer of specific activities from EPI to MSD was prepared to be circulated amongst different partners for discussions and comments. (Phase 2 mentioned in the Memorandum of Understanding between EPI and MSD. Unfortunately, up to now the Ministry has not provided any answer to this expected collaboration.

During October, ZMS and some RVS were visited and recommendations regularly provided to MSD and the Ministry of Health: (see annex)

Visit to ZMS TANGA, RMO's office and RVS TANGA: 14–15 October 1996

Visit to ZMS MWANZA, RMO's office and RVS MWANZA: 16–18 October 1996

Visit to ZMS TABORA, RMO's office and RVS TABORA: 23–25 October 1996

Visit to ZMS MTWARA, RMO's office and RVS MTWARA: 01–03 November 1996

C. Conclusion

An implementation proposal has been prepared in this report which should help the partners involved in the upcoming second phase of the transfer. Although the collaboration of the EPI responsables has not materialized as expected, a number of recommendations are proposed, based on discussions and working meetings with MSD staff and numerous Regional Health Officers. This plan depends on the fulfillment of a number of conditions.

Conditions to operate a realistic and functional transfer of activities:

1. To finalize Phase I of the transfer

Although the physical transfer has been made, the administrative part of it is not yet finalized. In addition to that, non-DANIDA partners in EPI should be informed in order to establish and adopt new appropriate procedures at the central level.

2. Global support from the Ministry of Health

Given that the transfer of EPI specific activities is the first of a number of transfers a special attention should be given to this operation. EPI is in fact the first program concerned by this crucial part of the health sector reform as described in its Action Plan. Without a support from existing and well experienced health officers at different levels, MSD will not be able to provide expected services. Although MSD has a good experience in term of kits distribution, the logistic management of EPI related supply and especially vaccines necessitates well trained people and good monitoring. Furthermore, the risk of all inappropriate response would affect the other programs and compromise the implementation of this essential part of the health sector reform.

2.1. Specific technical support from EPI

The national cold chain officer and or one technician of his team need to be involved during the whole transfer procedure: Preparation, information to regions, training and transfer

2.2. Information to and technical support from the regions for the transfer operation

Information to RMO's: RMO's need to be informed that specific functions will be transferred to MSD (done in Mbeya October 1996). New procedures need to be introduced. Instructions to RCCO's and specific support provided by 7 RCCO's: All RCCO's need to receive instruction in order to assist the transfer operations. The RCCO's (7) based at ZMS locations will be requested to provide specific support needed as per proposal.

3. Financial aspect

Funds should be provided for distribution to regions not yet absorbed by ZMS: The distribution cost at regional level (RVS to DVS) need to be covered until the transfer to ZMS-MSD (up to June 1997 regarding the actual tentative schedule).

4. Cold chain

4.1. Cold chain equipment

As described lower, the cold chain is a crucial aspect of the vaccine distribution system. Repatriation of cold boxes and ice packs distributed to districts during NID's needs to be finalized. This is required before the implementation of the transfer .All equipment available in the regions needs to be transferred to MSD (Refrigerator, freezers, coldboxes, ice packs and generators) for re-dispatch, installation iii ZMS and to be stocked as a reserve at ZMS and MSD central.

At the regional level, one small refrigerator should be provided in order to store samples related to the Polio epidemiological surveillance. The capacity of the freezing compartment of a Sibir® refrigerator should be sufficient. Samples should never be stored with other items.

Purchase of 250 additional cold boxes (RCW25)

Purchase of 5000 additional ice packs

4.2. Power supply

TANESCO should provide "priority fine" to ZMS as per regional hospital conditions: A request should be addressed to TANESCO by PHC and MSD. A specific contact should be established with the local TANESCO representative by the Area manager at ZMS. The wiring system at ZMS needs to be adapted before the transfer.

A generator should be provided to each ZMS.

5. Transportation and distribution system

The general transport schedule and dispatch of lorries should provide a priority to a regular distribution schedule of vaccines. (National level and ZMS level) A biannual schedule can be prepared in advance.

Light vehicle needs to be provided or reserved at ZMS as a back up for specific distribution of vaccine.

Distribution schedule needs to be strictly followed (MSD to ZMS and ZMS to district)

6. Establishment of two additional ZMS

The establishment of two more ZMS has been taken for granted in the description of the transfer.

Mbeya To be opened in February 1997. (Target regions are Mbeya and Ruvuma.)

- Recruitment and training of staff (on EPI and cold chain requirements).
- Vehicles.
- Storage (including specific space for storage of vaccines).
- Power supply and communication. (See general recommendations.)
- Arusha Period to be determined by MSD (target regions are Arusha and Kilmanjaro). Same as Mbeya.

7. Financial procedures

According to the terms of reference, STC concentrated on physical storage and distribution of goods. Specific attention will be needed to the financial aspects in order to avoid interruption of the flow of supplies. Flexibility and specific procedures should be considered for non-routine activities (i.e., epidemics, NIDs.)

Non-EPI vaccines should be also considered in such an exercise.

D. Remarks

1. EPI routine activities

NTDs haven't been considered in this exercise. NIDs logistics should be planned long in advance and in view of the problems experienced for the upcoming NIDs, specific attention should be given to the monitoring of the dispatch and the repatriation of cold chain material and equipment.

2. Logistics management information system (LMIS)

A temporary system has been established according to existing tools. With the upcoming establishment of a computerized system, LMIS should be developed further.

E. Purpose of the final report

The purpose of this report is to—

1. Propose a strategy of implementation for Phase II

1.1. Description of the current distribution system

1.2. Description of the new system

- Distribution system
- Cold chain requirements
- Transport requirements
- Human resources requirements

1.3. Description of the modality for the transfer operation per ZMS (implementation proposal)

- The physical set-tip of storage facilities at ZMS.
- Role and responsibilities of each partner (MSD and EPI) in the preparation and the implementation of the transfer operation.

2. Provide an inventory of the tasks to assist in assigning the role and responsibilities of each partner in the revised system.

3. To highlight the major expenditures and procurement to be considered before and during the transfer operation.

4. Propose the new or revised forms required in the new procedure.

5. Propose a global schedule for the transfer of functions and related equipment.

6. Propose a description of the requirements per ZMS.

F. Principle

According to the Health Sector Reform Action Plan (1996/1999), regions and districts will be given greater roles. The indent system will expand throughout the country and the kit system eliminated. *The District Health Boards (DHB*) *will have authority and resources to implement their tasks.*

Such a new policy will affect the logistics management strategy. As more authority will be given to the peripheral level, some functions will be reversed. However, supervision from the central level to the peripheral will guaranty the quality of various activities.

1. Application of the new system to EPI activities

Considering the fact that MSD is supposed to continue to deliver basic ED kits to tile district level on a monthly basis, decision has been made to integrate the distribution of vaccines and EPI-related supplies into MSD distribution system. With tile integration of other vertical programs, the volume of items to be transported to tile districts *will* require MSD to visit the districts at least once a month.

The transfer of selected EPI functions will be the first exercise of a global transfer. In the future, and according to the Health Sector Reform Action Plan, MSD should manage tile entire flow of goods required at the district level. Therefore, the success of such a *pilot* operation will permit to evaluate what should be established on a larger scale.

Appendix I
Report on Tanzania Study Tour

A. Background

The Ministry of Health Kenya is currently undertaking restructuring of Medical Supplies Coordinating Unit (MSCU) as a critical component in the health sector reform process. This process has been underway for the last few years. Several studies have been completed and recommendations made on the way forward.

In June 1998, a Stakeholders conference entitled **"National Conference on Strategies for Reforming the Public Health Sector Drug and Medical Supplies System in Kenya"** was held to enable consensus building on the way forward and concretize the various recommendations on the MSCU restructuring. In this workshop, the resource persons were drawn from the countries, which are currently implementing health sector reform: Uganda, Ghana, Tanzania, and Zambia. WHO/Geneva also participated. The conference provided an excellent forum for information sharing on experiences and lessons learned in the region on how to implement more sustainable supplies systems.

The participants were invited to visit any of these countries for observation and to share first-hand the experiences gained in restructuring.

As a follow up to the conference, two committees were formed, the Steering Committee and the Task Force Committee. The committees have been working for the past year, and they felt a Kenyan team could benefit from an observational tour to one or more neighboring countries.

It is against this background that a team of eight officers from both the Steering Committee and the Task Force were identified to undertake a study tour to Tanzania, between 25–30 October 1999.

While in Tanzania, the team was to address the following areas:

1. The establishment, staffing and organization of the Medical Supplies Department.

2. Empowerment of the clients at various levels, such as the Referral Hospitals, The Regional Hospitals, Districts and Rural Health Facilities, etc., to function in the new pull system.

3. The type of distribution systems in place.

4. The information system in place and feedback mechanisms.

5. Monitoring and evaluation tools in place.

B. Expected Outputs

The team was in Tanzania for five days and was received the by Medical Stores Department (MSD) on behalf of the Ministry of Health Tanzania.

There was a full five-day program put together by the MSD staff in consultation with the Ministry of Health and made available to the Kenya team on arrival for any changes. The team accepted the program as presented and this was used to guide the study tour.

By the end of the week, the team felt that all the objectives of the study tour had been met.

On return from the trip, the study team compiled a report analyzing the observations and made recommendations towards finalization or inputs towards restructuring of MSCU in the following areas:

- The business plan development.
- The management information system.
- Business transaction with the decentralized health systems at the periphery levels.

C. General Overview of MSD

In the late eighties, the Central Medical Stores (CMS) of Tanzania had major constraints, which made efficiency and effectiveness elusive. Some of these problems were—

- Inappropriate policies
- Shortage of drugs and other health supplies
- Inefficient management and administration
- Lack of resources resulting in poor drug financing
- Inadequate security services
- Irrational drug use
- Inefficient procurement and management services
- Overstaffing.

These problems made it difficult for CIVIS to sustain a continuous supply of drugs and medical supplies to the public health sector which has six National (referral) hospitals, 20 Regional hospitals, 114 District Hospitals, and approximately 5,000 health centres and dispensaries.

To respond to these problems, the government commissioned a study in 1991 to develop recommendations on how best the government of Tanzania could resolve the drug crisis.

The study had two major outputs:

- A recommendation to make CMS an autonomous body.
- A Pharmaceutical Master Plan for the period 1992–2000.

As a result, in 1993 the Medical Store Department was established as an autonomous department in the Ministry of Health through an Act of Parliament (the Act of Parliament of 22 September 1993). The main objective was "to serve the public through delivery of drugs and other medical supplies to Public Health facilities and to serve the private sector except with narcotics only."

The MSD is expected to be a non-profit, although financially self-sustaining institution.

1. Layout of MSD

The activities of MSD at the central level take place in Dar-Es-Salaam. The operations are within a five-acre compound, with additional eight rented warehouses in Dar-Es-Salaam.

Housed within the central compound are—

- An advanced security system managed by a private firm: Group 4.
- The office block, which houses the four directorates.
- The central warehouse, which houses the receiving section, a picking section, a dispatch section, and a storage area. The latter area has different temperature levels. The main warehouse has two detached stores:
  - The Vaccine Store: a huge cold room with eight freezers where the vaccines are stored.
  - The Inflammable Store: used to store the inflammable items like laboratory reagents.
- An underground water tank with a capacity of 40,000 litters, all of which is rainwater collected from roof catchment.
- Fire fighting equipment generously located at almost every corner.
- Two stand-by generators with automatic switches.

The following areas were studied in detail:

2. Management structure

The Board of Trustees provides the general guidance of MSD management, while technical managers run the department on a day-to-day basis, through four technical directorates.

2.1. Board of Trustees

The board is composed of a chairman and eight members. It is non-executive and the president appoints the chairman. The Minister for Health appoints other members. The members are drawn exclusively from the public sector (MOH, Home Affairs, Works, Ministry of Law, Ministry of Children and Women, etc.). The Minister for Health appoints the board, which serves for a term of three years. The board meets four times in a year and five members constitute a quorum.

2.2. Main role of the board

- Guide, direct, and oversee the management of MSD.
- Formulate and review policy guidelines of the department's functions.
- Submit the Department's annual work plans and budget for the Minister's approval.
- Determine the price of the drugs and medical supplies.

Other than the Board of Trustee's regulations, other regulations are in place and used in running the MSD, including the Ministry of Health regulations, the in-house MSD regulations, and the procurement manuals for MSD.

2.3. Technical management

The technical arm of MSD provides the day-to-day management of the department. During the formative years, an external management firm under a five-year contract managed MSD with financial support from DANIDA. Every external consultant was teamed with a local expert. This arrangement was to provide capacity building for the local personnel who were expected to take over the management of MSD at the end of the contract of the external managers. This would ensure a smooth transition to the local managers.

During the time of the visit, all the expatriates had left except for the Finance and Administration Director.

There are four major directorates, all managed by directors assisted by middle-level managers. The directorates are:

- Directorate General
- Directorate of Finance and Administration
- Directorate of Procurement
- Directorate of Distribution and Sales.

3. Staffing

Before the current MSD came into being, there were 500 members of staff. This number was reduced to the current 250 through deployment to other government departments or retrenchment. The remaining staff had to sign a new contract with MSD but will still get their retirement benefits from the former employer (the government). Their contracts with MSD were backdated to 1994 and are reviewed annually, based on their performance appraisal.

4. Functions of the Directorates

4.1. Directorate General

The Director General, who heads the Directorate General is—

- Accountable to the Board of Trustees.
- The Secretary to the Board of Trustees.
- In charge of all management matters, including strategic planning, marketing, team building, and co-ordination between the directorates.
- The supervisor of MSD managers and staff.
- Expected to ensure sustainability of MSD managerial, financial, and logistics operations.

Other departments within this directorate are—

- MSD product pricing
- Quality assurance.

4.2. Directorate of Finance and Administration

The Finance and Administration Director is in charge of the following services and departments:

- Accounting and providing financial statements to the management
- Budgeting
- Personnel matters plus human resource development
- Staff rationalization
- Salary structure
- Information management system strategy (computerization)
- Audit.

4.3. Directorate of Procurement

The Director of Procurement is in charge of the following functional departments and services:

- Co-ordination of procurement functions
- Pharmaceuticals and Medical supplies
- Special procurement needs
- Tendering processes
- Payments of supplies once procured
- Clearing and forwarding activities
- Processing claims and insurance
- Receiving.

Procurement is guided by the Medical Tender Board.

Medical Tender Board

The Central Tender Board is the overall organ in charge of procurement for the government. However, the Medical Tender Board was formed at the request of the Board of Trustees to facilitate and shorten procurement procedures within MSD.

The main functions of the Medical Tender Board (MTD) are—

- Advertising, receiving, and opening the tenders

- Tender adjudication
- Issuing contracts to winning bidders
- Monitoring and evaluation of the suppliers' performance
- Accountability.

The Executive Management Team

The Executive Management Team (EMT) facilitates the emergency procurement. The team is comprised of members from the four directors in MSD. The executive management team has the power to procure emergency supplies up to a ceiling of U.S.$ 100,000 without prior MTB approval. But, consultation with the Chairman of MTB is mandatory.

4.4. Directorate of Distribution and Sales

The Director of Distribution and Sales, the largest of the three directorates, is in charge of the following services and departments:

- Warehousing, storage, and Inventory Control
- Distribution management from the central level to the zone
- Security management
- Supervision of the zonal stores
- Rehabilitation and construction of warehouses
- Monitoring and evaluation
- Transport management including, managing the diesel plant and transport, and maintaining the in-house garage.

Transport

The directorate has a strong transport department with 16 trucks (Scania), six trailers (ten-toners, however they carry 20 tons each) for distribution of medical supplies, and 16 staff vehicles. There are seven zonal stores and all are provided with two trucks, a pick-up, and a motorcycle each. There is a diesel plant managed by MSD where the trucks are filled.

Warehousing

Deals with orders to customers and distribution to zonal stores. The warehouse has well maintained records but is not computerized. All the records are manually maintained.

Distribution

There are three types of distribution systems:

- PUSH system of essential drugs kits, this is done on regular basis as directed by the Ministry.
- Loose (non-kit) drugs.

- Non-MSD stocks—vertical programmes.

Integration of vertical programmes

The following vertical programmes have been integrated into the MSD drug distribution system: Family Planning, EPI, TB and Leprosy, STD/NACP supplies, and malaria.

This was facilitated through a memorandum of understanding that allows MSD to cover storage and distribution costs.

Sales

There is an inventory management to control the sales and ensure that all commodities needed by hospitals are available, the overall service level is about 80% for MSD.

Security system

The MSD has a state of the art security system, managed by a private company called Group 4. Specific security systems are—

- Electronic surveillance instruments, alarm systems, and security cameras
- An electric fence along the entire MSD perimeter wall
- Control of the movement of the people and vehicles at the gate
- Checking and stock verifications.

The management of the Medical Stores Department works in close collaboration with the Pharmacy Board (PB) and the team had a chance to visit the board.

Pharmacy Board

The Pharmacy Board was established by an act of Parliament in 1978. The secretariat is headed by a Registrar and has 28 staff members. The Registrar is a government pharmacist and not the Chief Pharmacist.

Composition of the PB: there are thirteen members, the Registrar, the Chief Pharmacist, Veterinary Officers, Government Chemist representatives, Agricultural Officers, and two other pharmacists.

Roles and responsibilities of the Board

- Drug inspection and registration
- Quality control
- Safety and standards, drug importation, distribution and sale
- Drug manufacturing licensing.

National quality control laboratory

The need to have a national quality control laboratory has been identified, and the team was informed that a national quality control laboratory would be commissioned soon.

5. The Zonal Stores

The Medical Supplies Department runs seven zonal stores, which are located in Mwanza, Moshi, Tabora, Tanga, Iringa, Mbeya and Mtwara. The department services 20 Regions, 113 Districts and 2,740 health facilities (health centres and dispensaries). The team was able to visit one of the depots at Mwanza.

5.1. Mwanza Zonal Stores

The Kenyan Team flew to Mwanza Zonal Stores on 27 October 1999. The zonal store is almost a replica of MSD, Dar-Es-Salaam, in terms of operations and organizational structure (albeit in a small scale).

It has 26 staff members headed by an area manager. Mwanza Store serves four regions and 23 districts.

It has an elaborate security system—a huge perimeter wall, six security guards, and control of movement of people and vehicles at the gate.

The stores have a sales unit, accounts, and warehouses, which are stocked with three-month medical supplies (replenished on a monthly basis).

Clients visit:

To address the issue of client empowerment, the team visited two health institutions both served by Mwanza Zonal Stores:

- Bugando Referral Hospital
- Seko Toure regional hospital.

Bugando Referral Hospital

The team visited Bugando Referral Hospital, one of the six referral hospitals in the country with a bed capacity of over 800 patients (compares well to Kenyatta National hospital in Kenya). The hospital is managed jointly by the government and the Catholic Church. Initially it was a mission hospital. It was nationalised in 1971 and given back to the mission (joint management)in 1985.

The hospital procures 90% of its medical supplies from Mwanza Zonal Stores. As this is a referral hospital, there are requirements slightly out of the normal scope of the zonal store. However, these special supplies are also requisitioned through the same store.

The joint collaboration of the state and mission in running this health facility was of special interest to the Kenyan team.

The mission provides the buildings and senior managers and the government provides the rest of the staff. A managementboard guides the overall management of the hospital.

Seko-Toure Regional Hospital

Mwanza Zonal Store also serves the hospital. The team toured the hospital and held discussions with the hospital staff.

Ninety percent of the supplies used in the hospital are procured from the zonal store. The government has opened an account in thezonal store for Seko Toure Regional Hospital. Through this mechanism, the hospital can only collect drugs and medical supplies within its budget allocation.

It was noted that the hospital staff was not happy with this arrangement. They complained of under-allocation by the Ministry of Health, failure of cost sharing (75% waiver), and some drug items lacking in the zonal store. The team sought clarification from the Chief Medical Officer in Dar-Es-Salaam who admitted to a number of health services shortcomings at the periphery.

D. Successes

During the five-day tour the team made the following observations, regarding the success of the restructuring process.

1. At the policy level

- The relationship between MSD and MOH is very cordial and result oriented. The Chief Medical Officers says, "The Ministry is eyes on but hands off" to the activities of MSD. This provides the management with a level playing field.
- During our discussion with the Chief of Medical Services the equivalent of DMS in Kenya, it was clear that he has been involved in the project since it's inception.
- The chief had a clear vision of where the government of Tanzania wants MSD to be in relation to drugs and medical supplies in the near future.
- The chief's involvement with the formulation of the Pharmaceutical Master Plan in 1993 and its implementation is an added advantage to the relationship between MSD and the MOH.
- The top management of MSD is very appreciative of this overall guidance and support.

2. At the top management level

- The executive team displayed strong teamwork, was highly focused and had a strong sense of mission/vision. The team provides positive leadership to the staff, which is highly motivated.
- It was evident that MSD is an equal opportunity employer and quite competitive. The management reviews the terms and conditions of the staff regularly to keep them competitive.
- For the last five years, the top management was under an external management firm, but currently the only external senior manager is the acting director. However the position of the director has been advertised internationally.

3. At the operational level

- All the four directorates are well organized and output oriented. As a whole, MSD has implemented a very ambitious drug and medical supplies distribution programme. The program is well supported financially from both the government (World Bank funding), and the multilateral and bilateral donors.

4. Procurement

- The procurement directorate manages procurement procedures and provides technical inputs to the Medical Tender Board. The quantities to be procured are determined by the government through

treasury sanctions depending on availability of funds. Because of the huge quantities procured, MSD is able to provide drugs at a very competitive price.

5. Distribution system

- There is an integrated distribution system in place. However for both the essential drug kits and "vertical" program commodities the program is a push system.
- The directorate controls a strong network of distribution vehicles. Consisting of 16 trucks and six trailers for distribution of medical supplies at the central level and has provided the zonal depots with two trucks; one pick-up and one motorcycle each.
- The transport has its own diesel station from where all the trucks are fueled and an in-house garage where all the repairs are done.
- The team was informed that MSD had considered the options for contracting out transport and it was found not to be cost effective.

6. The Directorate of Finance and Administration

- Undertakes regular salary reviews to stay competitive and is in charge of all personnel issues.
- Utilizes a computer system called NAVISION for the overall management of the unit.
- Manages a system used for in-house capacity building.
- Overseas the day-to-day management of staff vehicles.

7. Security system

- The MSD complex has in place measures against theft and fire.
- To protect against theft, security services have been contracted out to Group 4.

At any one time, there are nine security guards on duty. There is a TV screen at the security house near the gate, which monitors activities at the main warehouse, the dispatch and receiving areas, and selected corners of the perimeter fence.

The department is well prepared in case of fire: As Dar-Es-Salaam has water shortage from time to time, there is in place an underground tank that collects all the rain water from the buildings and is stored for use in case of fire.

E. Lessons Learned

- For a change in medical supplies system of this magnitude to be implemented, there has to be a *total political support and clear policy direction.*
- The use of external management team has its own challenges, but has strength in that the newcomers have political immunity.
- The level of capitalization needs to be closely monitored. The central level capitalization and periphery level should be harmonized.

- For the health institutions to raise the relevant capital to procure drugs and medical supplies there should be a strong cost-recovery policy in place.
- The waiver system should be strict and closely monitored to avoid imbalance (e.g. only 25% of patients paying some fees with 75% are exempted).
- The Quality of generic drugs needs to be closely monitored.
- When repackaging is done, the quality of packing materials should be of acceptable standards.
- Transport is a key area and all options should be properly analyzed to achieve the most effective and efficient method.

F. Recommendations

1. The functional and successful semi-autonomous MSD is an example worth reproducing in our country.

2. Some of the lessons learned illustrate the areas to consider carefully when implementing the autonomous IVISCU, e.g., the issue of external management. While this is a strength, the functional arrangements should be closely examined.

3. Cost sharing, if the institutions are to raise money for procuring drugs, the waiver mechanisms should be such that the institution is able to raise enough funds for the drugs.

4. The Health Insurance Schemes should be revitalized and enable hospitals to draw their compensations easily. For the community without insurance medical cover, innovative methods should be identified to enable them access to medical services.

5. The working relationships between the church organizations and the MOH in running the large health facilities currently under the church need to be reviewed and possibly use the Tanzania model. (As described above, the church owns the buildings, has the management boards in place, but the rest of health staff are civil servants.)

7. There is a strong need to continue exchanging ideas between Kenya and Tanzania as regards drugs in particular and other health issues in general.

8. In dealing with pharmaceutical companies, it would be cost effective to share ideas on reputable companies and when feasible undertaking a joint procurement. As demonstrated by IVISD, large quantities enable them to get competitive prices. The drug needs in the region are very similar and joint regional procurement is an option worthy of consideration.

Appendix J
RCHS and MSD Achievements in Operationalizing MoU

A. Background

Until December 1998, the logistics system to deliver family planning products in Tanzania was completely vertical. During development of the health sector reform agenda, integration of logistics functions was identified as a high priority. To this end, the RCHS unit (formerly the Family Planning unit), has chosen to integrate selected logistics functions, with the aim that efficiencies are achieved but the effectiveness of the existing contraceptive logistics system is not disrupted.

As a first step towards integration, central to zonal level storage and distribution has been contracted out to MSD, which stores and distributes all essential drugs, and some vaccines. Responsibility for contraceptive storage and distribution by MSD began with a pilot tested from December1998 to June 1999 in one region (Iringa). In July 1999, responsibility for contraceptive storage and distribution for the whole country was contracted to MSD, and a memorandum of understanding (MoU) was developed between RCHS and MSD.

The MoU requires that the terms be reviewed annually. Currently, however, RCHS has no mechanism or tool to assess progress in attaining the goals outlined in the MoU or MSD's performance as per the contractual requirements. The need for such a system is evident; results from the April 1999 Situational Assessment of Public Health Logistics Systems suggested that MSD services do not meet all of RCHS' needs. RCHS identified development of a monitoring system to measure MSD's performance according to its contractual obligations as a priority.

B. Overview of MSD Structure and Services

MSD have a central warehouse in Dar-Es-Salaam and seven zonal warehouses, which supply the 20 Regions and 116 Districts in the country. The zonal warehouses supply the following regions:

Zone	Regions
Mwanza	Mwanza, Kagera, Mara, and Shinyanga
Tabora	Tabora, Singida, Dodoma, and Kigoma
Iringa	Iringa, Ruvuma, Mbeya, and Rukwa
Tanga	Tanga, Kilimanjaro, and Arusha
Mtwara	Mtwara and Lindi
Dar South	Dar South, Coast, and Morogoro
Dar City	Dar Municipalities of Ilala, Temeke, and Kinondoni

RCHS determines stock levels for MSD to store at its central warehouse, and these are usually maintained between the pre-established minimum and maximum inventory levels of 11 months and 20 months, respectively. Replenishing stock levels at the zonal warehouse to maintain minimum and maximum inventory levels is not specified by the MoU and is at the discretion of internal MSD management.

Nonetheless, zonal warehouses must always have sufficient quantities of contraceptives with which to resupply districts.

MSD distributes contraceptives according to a pre-determined schedule based on the delivery plan for essential drug kits. Zones deliver commodities to districts every two months. If for some reason EDP kits are delayed from leaving the zones, MSD must still deliver contraceptives according to the original schedule. Before leaving on the distribution visits, MSD zonal managers are supposed to receive R&R reports from all districts serviced by the zone and use the quantities ordered on the form to resupply districts. At the time of delivery, MSD is supposed to pick up R&Rs from district MCH Coordinators. If at the time of delivery, MSD has not received a current R&R, the policy is to use the previous R&R received and repeat the quantity ordered previously.

MSD currently provides RCHS with three sources of information:

1. Quarterly Reports from MSD Central Office (headquarters)
   - This provides data on stock balances, quantities received, quantities distributed, and expiry dates for all contraceptives held at MSD.

2. Bi-monthly distribution and cost reports (from MSD headquarters)
   - This is accompanied by an invoice and proof of delivery and summarizes costs and quantities distributed by zones.

3. Bi-monthly MSD Zonal Reports
   - A cover letter accompanies copies of all the R&R forms collected during the distribution schedule. Information on the letter varies according to the zone and is not standardized.

C. Developing a System to Monitor MSD's Performance

1. Establishing goals and expectations

RCHS's decision to contract out its storage and distribution functions to MSD represents the first time the unit has outsourced responsibility for any logistics functions. Consequently, a precedent for how it should manage the outsourcing partnership with MSD does not exist. Research has shown that failures in outsourcing partnerships are usually a result of poor communications, lack of top management support, lack of trust, poor up-front planning, lack of strategic direction for the partnership and lack of shared goals[3]. Usually, the cause of conflict can fall into either of two general categories:

1. A mismatch in perception over the appropriate degree of partnering.

2. Improperly executing the partnership building process.

[3] Lambert D. M., Emmelhainz and J. Gardner. 1999. "Building Successful Logistics Partnerships" in *Journal of Business Logistics*; vol. 20 (no. 1) p 165-181.

Before developing a monitoring tool, it was important to clarify RCHS' goals and expectations regarding the purpose of the monitoring system and the intended utility of the information gathered by such a system. RCHS identified the following goals:

1. Establish a feedback mechanism between MSD and RCHS to ensure—
   - Frequent information sharing about quantities distributed to districts by MSD and the costs to RCHS for these services.
   - Problems in storage and distribution of contraceptives are addressed rapidly and effectively.
2. Promote rapid response to requests, questions or complaints raised by RCHS to MSD.

RCHS' goals, at this time, are focused on improving the working relationship between itself and MSD to ensure open and regular information exchange so that logistics problems can be rapidly addressed. Although developing a formal monitoring system to measure contractual compliance is still a long-term goal, its implementation is more likely to be assured after the following three issues have been addressed:

- Building the foundation for an open and two-way channel of communication between RCHS and MSD.
- Determining the nature of information that RCHS would like to collect to assess MSD performance and developing corresponding indicators.
- Ensuring that RCHS has a viable system for data entry and analysis to allow information from the MSD monitoring tool to be used for decision making and to provide feedback.

2. Beginning to open communication channels

As a first step towards establishing open channels of communication, RCHS and MSD met to discuss the nature of data exchanged and the best means through which information can be shared. MSD expressed its commitment to customer service and to transparency of its operations to build confidence of RCHS and other customers.

Both RCHS and MSD agreed that there was a need for more open channels of communication. The consensus was that issues raised by RCHS need not be limited to written correspondence and both parties should engage in ongoing verbal communication to ensure timely resolution of these issues.

In addition to agreeing on enhanced communication efforts, RCHS and MSD will implement the following changes to current practices:

1. **MSD** will add a column for Months of Supply (MOS) on the spreadsheet attached to the MSD Quarterly Reports, beginning with the **December 2000** report.
2. **MSD** will communicate with zonal warehouse managers to amend the MSD Zonal report in the following way beginning with the **September 2000** reports:
   - Standardizing the cover letter which accompanies R&Rs sent on a bi-monthly basis (see Appendix A).
   - Including a spreadsheet from the zone breaking down distribution information by product and district.

3. **MSD** will share with RCHS the full results pertaining to family planning products of the annual stock taking exercise, including quantities of losses, and discrepancies between physical and book counts. MSD will also share similar results from ongoing cycle counting that it conducts for family planning products. If losses are present, **RCHS** and **MSD** will jointly discuss what levels are acceptable and what levels RCHS needs to be compensated for.

4. **RCHS** will follow up with its financial department to determine why MSD has not received timely payment for services and to expedite payment for backdated charges.

5. Both **RCHS** and **MSD** will try and obtain financial updates from their financial counterparts routinely to prevent such a circumstance from reoccurring.

6. **RCHS** will make efforts to be more timely in disposing of expired or condemned products stored at MSD.

Obtaining standardized information from MSD is a first step towards RCHS developing indicators for monitoring MSD performance. In the meantime, RCHS capacity for aggregating and analyzing data will be assessed to ensure that once monitoring indicators are developed and the system implemented, there is capacity to use the information for decision making.

3. Identification of further information requirements

In the interim period during which MSD is updating its procedures to provide RCHS with more and consistent data on a routine basis, RCHS should begin identifying the type of information that it would like to collect to assess MSD performance. The data identified is not intended to monitor MSD performance but rather to enhance RCHS' ability to monitor the logistics system performance. As RCHS continues to work with MSD, it should monitor areas in which MSD performance can be improved and consequently identify the types of information that would allow monitoring of this performance. A basic tool for aiding this process is attached as Appendix B.

Concurrently, RCHS should continue to take steps to build a more open relationship between itself and MSD.

Appendix K
Costs for Contraceptive Storage and Distribution by MSD (July 1999–June 2000)

A. Background

The Memorandum of Understanding (MoU) between RCHS and MSD requires the commercial terms of the contract to be reviewed and revised annually (MoU, Appendix A). In theory, the review of costs for the first year should include an analysis of cost savings achieved by contracting out storage and distribution services to MSD. However, this will prove difficult to determine for the following reasons:

1. A costing of the previous vertical storage and distribution system does not appear to have been conducted, or if it was done, documentation has not been found.

2. The components of the vertical system are not directly comparable to those of the integrated system (MSD delivers to districts, while the previous system delivered products to regions).

Although the comparison is not possible at this time, based on the description of vertical program costs (listed below), it appears as though contracting out storage and distribution services to MSD has indeed resulted in cost savings for RCHS.

B. Vertical Delivery System Costs

Previously, family planning products were stored in a central warehouse—separate from those for essential drugs and vaccines—which was rented using funds from USAID. USAID also covered all operational costs for the warehouse, including utility costs, security costs and personnel costs. Three operational trucks at the central level—two of which were donated by USAID and one by UNFPA—were used to transport commodities to the regional warehouses. Maintenance, fuel costs and drivers' salaries and per diems for each of the three vehicles were provided by the organization that donated them. Once commodities were delivered to regions, storage and distribution responsibilities were passed onto the Regional and District MCH Coordinators. USAID had donated one 4WD vehicle for each of the 20 regions for distribution of contraceptives and vaccines. Maintenance and fuel costs for these regional vehicles, as well as salary and per diem for drivers were covered by DANIDA, as part of its funding for the EPI program.

C. Costs for Integrated Storage and Distribution by MSD

As part of the MoU, MSD's charges include the following costs:

- Central level storage for all family planning commodities
- Zonal level storage for all family planning commodities
- Central to zonal to district level distribution costs for all family planning commodities ordered by district MCH Coordinators using the R&R forms.

Under the terms of the MoU, the costs were to be split equally (50%/50%) between USAID and UNFPA, the two major donors for contraceptive commodities.

Information on costs and distribution by MSD was obtained for the 12-month period from July 1999–June 2000. This is summarized in the table below:

Table K-1. Quantities Distributed and Storage Costs (U.S.$) for Contraceptives July 1999–June 2000

	Product	Unit of issue	Actual units distributed	No. of cartons distributed	Charges per carton	Total charges
1	Microgynon	Cycles	2,402,400	910	26.96	24,533.60
2	Microval	Cycles	381,600	636	8.33	5,297.88
3	Lo-Femenal	Cycles	1,658,400	1,382	16.09	22,236.38
4	Depo-Provera®	Vials	1,509,175	15,092	4.75	71,687.00
5	Condoms	Each	7,367,010	1,169	16.09	18,809.21
6	Copper T	B/25	10,325	413	1.37	565.81
	TOTALS		**13,328,910**	**19,602**		**143,129.88**

Source: MSD, July 2000

On average, the cost per unit distributed was $0.01 and the cost per carton distributed was $7.3.

Condoms accounted for the majority (55.3%) of total units distributed, which corresponded to 13.1% of total costs. Microgynon and Lo-Femenal were second and third, respectively, accounting for 18% and 12.4% of total units distributed, which corresponded to 17.1% and 15.5%, respectively, of overall costs. Although the charge per carton is higher for Microgynon than for Lo-Femenal, both products cost the same per unit to distribute: Microgynon costs $0.010 per unit versus Lo-Femenal, which costs $0.013 per unit.

The most costly item to distribute is Depo-Provera®. Charges for distributing Depo-Provera® accounted for 50.1% of total costs although Depo-Provera® only accounted for 11.3% of total units distributed. However, Depo-Provera® accounted for 77% of the volume of cartons distributed, suggesting that although cost per carton of Depo-Provera® is low, a large number of cartons must be distributed to meet demand.

D. Breakdown of Payments by Donors

As of August 25, 2000, RCHS had paid a total of U.S.$ 77,997.4 (TShs. 62,397,951) to MSD[4]. There are still outstanding payments in the amount of $65,132.48 (TShs. 52,105,984) that have yet to be paid for the period from July 1999–June 2000.

[4] Exchange rate used of U.S.$ = TShs. 800

The breakdown of costs between donors for this amount was as follows:

- USAID has paid for 57.1%, or $44,525.53 (TShs. 35,620,423.00).
- UNFPA has paid for 42.9%, or $33,471.91 (TShs. 26,777,528.9).